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TITLE OF THESIS PATTERNS OF INTRA-URBAN

..... MIGRATION IN EDMONTON AND THE

..... RESIDENTIAL RELOCATION PROCESS

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PATTERNS OF INTRA-URBAN MIGRATION IN EDMONTON
AND THE RESIDENTIAL RELOCATION PROCESS

by



KEVIN WILLIAM JOHN McCRAKEN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE
STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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DEPARTMENT OF GEOGRAPHY

EDMONTON, ALBERTA
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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and
recommend to the Faculty of Graduate Studies and Research,
for acceptance, a thesis entitled PATTERNS OF INTRA-
URBAN MIGRATION IN EDMONTON AND THE RESIDENTIAL
RELOCATION PROCESS submitted by Kevin William John
McCracken in partial fulfilment of the requirements for the
degree of Doctor of Philosophy.

ABSTRACT

This thesis examines selected dimensions of residential mobility within the Edmonton area. The topics investigated fall within two general themes: (1) the spatial patterning of intra-urban migration, and (2) the residential relocation decision-making process. With regard to the first theme, the study tests several hypotheses on mobility rates and the distance, sectoral and directional components of intra-urban migration flows. The second theme covers the factors inducing residential shifts, the aspiration sets of mover households, residential information gathering, the choice of the destination dwelling, and household search spaces.

The data for the analyses of the spatial patterning of migration were obtained by comparing the entries in Edmonton Telephones' 1970 and 1971 subscriber directories. A structured questionnaire survey of 342 mover households provided the data for the decision-making analyses.

The directory derived data revealed mobility rates to decline with increasing distance from the city center. The data also provided support for the notion that intra-urban migrations display marked distance, sectoral and directional biases.

The questionnaire survey revealed inadequate living space to be the principal migration motivating factor. The largest share of household residential aspirations related to site and dwelling features, and within this general category space specifications were predominant. For the sample as a whole, walking or driving around was found to be the most frequently used method of locating vacancies.

However, in terms of information effectiveness, friends and relatives emerged as the leading information source. Residential information sources were also revealed to be selective of vacancy types and spatially biased. Most households were found to have inspected comparatively few vacancies. Dwelling choices generally proved to be based on site and dwelling, financial, or distance to work considerations. The survey data yielded no support for the popularly held notion that households completely confine their search activities to known sections of the urban area. Most households, however, were found to have excluded some known areas from search consideration before they actually began searching. Household search spaces were also found to display distinct distance, sectoral and directional biases.

The concluding chapter provides a general overview of how and when various factors are important in the residential relocation decision. In addition, it is suggested that future studies of intra-urban migration should concentrate on household decision-making processes, and to this end should utilize a 'diary' approach to obtain relevant information.

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Chapter I

INTRODUCTION

This thesis investigates selected aspects of residential mobility within the Edmonton urban area. Although intra-urban residential shifts constitute only one of several types and scales of human migration,¹ in the case of highly urbanized societies such as Canada and the United States, they form by far the greatest proportion of the total volume of migratory movements.²

Migration, in its variety of forms, is widely recognized as an important process of human organization and, as such, has been the subject of considerable inquiry. The foundation stone of migration study is generally accorded as being the classic work of Ravenstein on the "laws" of migration.³ Since that time, a strikingly multidisciplinary body of migration literature has been developed, contributions having been made by economists, sociologists, human ecologists, social psychologists, geographers, urban and regional

¹A distinction is sometimes made in studies of population relocation between the terms 'migration' (movements across some migration defining boundary) and 'mobility' (movements involving no such boundary crossing). However, the terms are used interchangeably in the present study.

²Approximately 60 per cent of all moves in Canada over the period 1956-1961 were within the same municipality. See Dominion Bureau of Statistics, 1961 Census of Canada, Bulletin 4.1-9, (Ottawa, 1965). In the United States about two-thirds of all moves are intra-county. See J. W. Simmons, "Changing Residence in the City: A Review of Intra-Urban Mobility," Geographical Review, Vol. 58, 1968, p. 622.

³E. G. Ravenstein, "The Laws of Migration," Journal of the Royal Statistical Society, Vol. 48, 1885, pp. 167-227; idem, "The Laws of Migration," Journal of the Royal Statistical Society, Vol. 52, 1889, pp. 241-301.

planners, and most other representatives of the social and behavioral sciences.

Basically, for convenience of study, migratory movements are conventionally considered as consisting of two broad categories: (1) International Migration - the movement of people between countries, and (2) Internal Migration - the migration of persons within a country.

At the international scale, studies have investigated migration streams,⁴ the various economic correlates and consequences of migration,⁵ problems of assimilation and aspects of migration policy.⁶ Internal migration research has, in many respects, paralleled that for international movements. For example, the major flow

⁴See for example A. T. Bouscaren, International Migrations Since 1945, New York, Praeger, 1963, 176 pp.; M. R. Davie, World Immigration, New York, Macmillan, 1936, 588 pp.; D. Kirk, "Major Migrations Since World War II," Proceedings of the Thirty-Fourth Annual Conference of the Milbank Memorial Fund: 1957, New York, 1958, pp. 11-28; F. D. Scott, (ed.), World Migration in Modern Times, Englewood Cliffs, Prentice-Hall, 1968, 177 pp.; and D. R. Taft and R. Robbins, International Migrations, New York, Ronald Press, 1955, 670 pp.

⁵J. Isaac, Economics of Migration, New York, Oxford University Press, 1947, 285 pp.; B. Thomas, Migration and Economic Growth, Cambridge, Cambridge University Press, 1954, 362 pp.; idem, (ed.), Economics of International Migration, London, Macmillan, 1958, 502 pp.; and C. Wilson et al, Economic Issues in Immigration, London, Institute of Economic Affairs, 155 pp.

⁶See W. S. Bernard, American Immigration Policy: A Reappraisal, New York, Harper, 1950, 341 pp.; W. D. Borrie et al, The Cultural Integration of Immigrants, Paris, UNESCO, 1959, 297 pp.; S. N. Eisenstadt, The Absorption of Immigrants, London, Routledge and Paul, 1954, 275 pp.; I. A. MacDonald, Race Relations and Immigration Law, London, Butterworths, 1969, 211 pp.; and A. H. Richmond, Post-War Immigrants in Canada, Toronto, University of Toronto Press, 1967, 320 pp.

patterns,⁷ the economic causes and consequences of internal population redistributions,⁸ and the diverse social and socio-psychological problems⁹ created and solved by migration have all been the subject of much research.¹⁰

In the interests of analytic simplicity, a further research convention has been to disaggregate internal migration into

⁷ For example see I. B. Anderson, Internal Migration in Canada, 1921-61, Staff Paper No. 15, Economic Council of Canada, Ottawa, Queen's Printer, 1966, 90 pp.; J. C. Caldwell, African Rural-Urban Migration, New York, Columbia University Press, 1969, 258 pp.; H. S. Shryock, Population Mobility Within the United States, Chicago, Community and Family Study Center, University of Chicago, 1964, 470 pp.; and K. C. Zachariah, A Historical Study of Internal Migration in the Indian Sub-Continent, 1901-1931, Bombay, Asia Publishing House, 1964, 297 pp.

⁸ See S. Kuznets and D. S. Thomas, "Internal Migration and Economic Growth," Proceedings of the Thirty-Fourth Annual Conference of the Milbank Memorial Fund, 1957, New York, 1958; J. B. Parr, "Outmigration and the Depressed Area Problem," Land Economics, Vol. 42, 1966, pp. 149-159; D. O. Price, "Some Socio-Economic Factors in Internal Migration," Social Forces, Vol. 29, 1941, pp. 409-415; and L. A. Sjaastad, "The Costs and Returns of Human Migration," Journal of Political Economy, Supplement to Vol. 70, 1962, pp. 80-93.

⁹ For instance see J. A. Abramson, Rural to Urban Adjustment, ARDA Research Report No. RE-4, Ottawa, 1966, 160 pp.; G. Beijer, Rural Migrants in Urban Setting, The Hague, Martinus Nijhoff, 1963, 327 pp.; E. B. Brody, (ed.), Behavior in New Environments, Beverly Hills, Sage Publications, 1969, 479 pp.; F. M. Martinson, "Personal Adjustment and Rural-Urban Migration," Rural Sociology, Vol. 20, 1955, pp. 102-110; and R. C. Taylor, "Migration and Motivation: A Study of Determinants and Types," in J. A. Jackson, (ed.), Migration, London, Cambridge University Press, 1969, pp. 99-133.

¹⁰ Numerous other research similarities can be drawn. For example, at both scales attention has been given to the demographic selectivity and consequences of migration. At the same time, various differences are apparent. For instance, much greater emphasis in internal migration research has been placed on the development of theoretical models. Studies of internal migration have also been relatively more concerned with the spatial dimensions of population movement.

its constituent spatial elements. Thus, in terms of scale, internal migration has been studied at both the inter- and intra-regional level, while on the basis of origin and destination types, rural-rural, rural-urban, urban-rural, inter-urban, and intra-urban flows have been identified and examined.

MIGRATION AND GEOGRAPHY

A retrospective examination of migration studies reveals that geography's contribution to research has been comparatively slight. In fact only over the last decade have geographers begun to show the consistent interest in migration that might have been expected of them, given the obvious spatial dimensions of population movements. Furthermore, the migration studies which have been undertaken exhibit a bias towards rural-urban and inter-regional movements at the expense of inter- and intra-urban flows. Several factors appear to have contributed to these trends.

The relatively recent development of population geography as a distinct systematic branch of the parent subject would seem to explain some of the neglect. For most English-speaking geographers, population geography has only been recognized as a major subdivision of the discipline since Trewartha's address to the Association of American Geographers in 1953.¹¹ Prior to that time, population geography had been irregularly acknowledged as being of importance,

¹¹G. T. Trewartha, "A Case for Population Geography," Annals of the Association of American Geographers, Vol. 43, 1953, pp. 71-97. This is not to suggest that English-speaking geographers had completely ignored population studies before 1953.

though in the main outside the English-speaking world.¹² Indicative of this neglect was Hartshorne's direction-setting methodological treatise in which population rated no more than three cursory references.¹³

Since Trewartha presented his case for population geography, similar statements have been made by Ackerman, Clarke, and Zelinsky.¹⁴ As a result, most geographers now accept population geography as a distinctive field of study, although some still profess doubts as to the validity of the field on the grounds that any distinctions drawn between it and demography tend to be tenuous or even artificial. This general acceptance of population geography has in turn meant an

Within the early writings of human geography, evidence can be found to disprove any such claim. For instance see O. E. Baker, "Rural-Urban Migration and the National Welfare," Annals of the Association of American Geographers, Vol. 23, 1933, pp. 59-126; C. Close, "Population and Migration: A Statistical Study with Special Reference to English-Speaking Peoples," Geography, Vol. 14, 1927, pp. 1-24; W. L. Joerg, "A Note on the Numerical Distribution of the Population of the World According to Climate," Annals of the Association of American Geographers, Vol. 21, 1931, pp. 127-129; and G. Taylor, Environment, Race and Migration: Fundamentals of Human Distribution, Toronto, University of Toronto Press, 1937, 483 pp.

¹²See S. de Geer, "On the Definition, Method and Classification of Geography," Geografiska Annaler, Vol. 5, 1923, pp. 1-37; P. George, Introduction à l'Etude Géographique de la Population du Monde, Paris, Institut National d'Etudes Demographiques, 1951, 284 pp.; and A. Hettner, Die Geographie, ihre Geschichte, ihr Wesen und ihre Methoden, Breslau, 1927.

¹³R. Hartshorne, The Nature of Geography, Lancaster, Association of American Geographers, 1939, pp. 220, 242, and 331.

¹⁴E. A. Ackerman, "Geography and Demography," in P. M. Hauser and O. D. Duncan (eds.), The Study of Population, Chicago, University of Chicago Press, 1959, pp. 717-727; J. I. Clarke, Population Geography, Oxford, Pergamon, 1965, 164 pp.; and W. Zelinsky, A Prologue to Population Geography, Englewood Cliffs, Prentice-Hall, 1966, 150 pp.

acceptance of migration, as the latter, along with fertility and mortality, is one of the three factors which effect changes in the size and distribution of human populations.

Further explanation of the recency of geographic interest in migration can be found in the basic methodological development of the discipline. For example, much of the early work in population geography concentrated on establishing a substantive base of conceptually simple, static distributional studies.¹⁵ Similarly, until the late 1950s a large share of the intra-urban geographic research effort was directed towards little more than the description of urban form. On this point Boal has written that "in geography we have examined the results of activity as displayed in the townscape" at the expense of "the study of activities themselves."¹⁶ Towards the end of the 1950s, however, mounting dissatisfaction with this essentially static methodology initiated a shift towards the explanatory, process-oriented approach which presently guides the discipline. In the case of population studies, this has meant a greater concern for migration and other processes of population change.

The rural-urban emphasis is understandable in view of the fact that until relatively recently rural depopulation and the consequent urbanization were the most visible, important, and ongoing demographic processes in the western world. Indeed rural-urban

¹⁵This point is also made in L. D. B. Heenan, "Rural-Urban Distribution of Fertility in South Island, New Zealand," Annals of the Association of American Geographers, Vol. 57, 1967, p. 714.

¹⁶F. W. Boal, "Territoriality on the Shankill-Falls Divide, Belfast," Irish Geography, Vol. 6, 1969, pp. 30-50.

movements are still of some significance and deserve further study, but in terms of relative magnitude and consequence, inter- and intra-urban moves are now of greater importance and warrant most attention.

The direction of migration research has almost certainly also been guided by data deficiencies. Intra-urban mobility studies require detailed flow data at the micro level, but in the general absence of continuous population registers, such information is rarely available from official sources. On the other hand, inter-regional and rural-urban type analyses have been able to make some use of official census and vital statistics data.

INTRA-URBAN MIGRATION AND GEOGRAPHY

The dynamic character of urban environments has been acknowledged by urban researchers for many decades. Indeed the classic concentric ring and sectoral models of the internal structure and growth of cities formulated by Burgess and Hoyt, respectively, were based on dynamic images of the city.¹⁷ Similarly, Colby, a contemporary of Burgess and Hoyt, spoke of the modern city as "a dynamic organism constantly in process of evolution."¹⁸ Unfortunately,

¹⁷E. W. Burgess, "The Growth of the City: An Introduction to a Research Project," in R. E. Park et al, The City, Chicago, University of Chicago Press, 1925, pp. 47-62; H. Hoyt, The Structure and Growth of Residential Neighbourhoods in American Cities, Washington, United States Government Printing Office, 1939, 189 pp.

¹⁸C. C. Colby, "Centrifugal and Centripetal Forces in Urban Geography," Annals of the Association of American Geographers, Vol. 23, 1933, p. 1.

much of the subsequent empirical research on urban structure fell short of these statements and produced little more than cross-sectional profiles of city morphology at given moments in time.

However, the recent development of a process-oriented methodology has reawakened urban researchers to the fact that "the key element in understanding the city is change."¹⁹

Of the many processes producing urban spatial structural change, residential mobility has been identified as one of the most significant. In the introduction to his socio-psychological investigation, Why Families Move, Rossi stated that

Basic research into residential mobility is of importance because mobility is one of the most important forces underlying changes in urban areas.²⁰

But Rossi's work failed to generate widespread interest in the intra-urban migration process and a decade and a half later Simmons felt able to preface a review paper with the comment that

The present study is concerned with an important, but relatively neglected, aspect of migration, namely changes in residence that take place within a city.²¹

Later in the same paper, Simmons expanded upon this statement.

The spatial differentiation of residential attributes is largely the result of the cumulation of intra-urban moves. Unfortunately, the type of data available has caused urban research to focus on the static distributions instead of on the processes that generate urban patterns. Yet so many significant urban phenomena - for example,

¹⁹L. S. Bourne, "Introduction," in L. S. Bourne (ed.), Internal Structure of the City, New York, Oxford University Press, 1971, p. 5.

²⁰P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, p. 2.

²¹J. W. Simmons, op. cit., p. 622.

social segregation, the housing market, and urban growth - operate through the mechanism of intra-urban mobility that it merits systematic study.²²

Similarly, Boyce has written;

Residential growth is widely recognized as a major factor in understanding urban spatial structure, pattern and change. However, it has not been treated properly at the residential unit level nor in detail sufficient to reveal the true complexity of intra-urban residential mobility . . .

The missing link in most approaches is the process of residential mobility itself. Specifically how and why do people change residence? What are the micro patterns of mobility within the city? . . . These questions have not been investigated in depth, either theoretically or empirically.²³

The principal contribution geography can make to the understanding of intra-urban migration is in relation to the spatial patterning of mobility. In fact Rossi pointed the way to such a contribution in the concluding section of his work.

Perhaps the most seriously neglected aspect of mobility is its spatial patterning . . . the reason analysis presented in Section III accounts for why the households moved and why they made particular choices in new dwellings, but does not account for the spatial patterning of those choices. Nor is the overall patterning of shifts within the city touched upon . . . Few studies have considered the social psychological aspects of spatial patterning and this dimension might well deserve the attention of future research.²⁴

More recently, Brown and Holmes have observed that

²²Ibid., p. 649.

²³R. R. Boyce, "Residential Mobility and Its Implications for Urban Spatial Change," Proceedings of the Association of American Geographers, Vol. 1, 1969, p. 22.

²⁴Rossi, op. cit., p. 184.

. . . relatively little attention has been given to the spatial patterning and geometrical aspects of intra-urban migrations.²⁵

In retrospect, Simmons' paper has proven to be somewhat of a research watershed, for since its publication more geographers have shown interest in the field. The research effort to date may be categorized as having followed two principal lines of inquiry. Firstly, attention has been directed towards the construction and evaluation of 'non-behavioral' migration models.²⁶ Considerable impetus for this approach has come from the lack of suitable data for micro-analytical models, thus necessitating efforts to extract maximum utility from existing aggregated areal data. Meanwhile, other researchers have undertaken preliminary studies into the 'behavioral' aspects of household changes of residence. Within this school, two sub-themes are discernible. On the one hand, a few studies have attempted

²⁵L. A. Brown and J. Holmes, "Intra-Urban Migrant Lifelines: A Spatial View," Demography, Vol. 8, 1971, p. 103.

²⁶The term 'non-behavioral' is used in the sense that these studies have used areally aggregated data and have concentrated on the associations between migration and various socio-economic and demographic variables, as opposed to studying the household relocation decision-making process. For example see R. J. Johnston, "Some Tests of a Model of Intra-Urban Population Mobility: Melbourne, Australia," Urban Studies, Vol. 6, 1969, pp. 34-57; E. G. Moore, "The Structure of Intra-Urban Movement Rates: An Ecological Model," Urban Studies, Vol. 6, 1969, pp. 17-33; and idem, "Comments on the Use of Ecological Models in the Study of Residential Mobility in the City," Economic Geography, Vol. 47, 1971, pp. 73-85.

to analyze the various spatial biases of intra-urban movements.²⁷ These studies have been classified within the behavioral tradition as the spatial biases identified have usually been explained in terms of urban spatial structure and human behavior within that structure. On the other hand, a developing interest has been shown in various aspects of the decision-making processes associated with residential mobility.²⁸ The present study attempts to contribute to both of these behavioral themes.

The interest in behavioral aspects of migration reflects the growing interest of researchers in all fields of human geography in adopting the cognitive-behavioral approach to help solve geographical problems.²⁹ The roots of the 'behavioral revolution' are to be found in the dissatisfaction of many geographers with the low levels of 'explanation' generally achieved through the use of normative,

²⁷See J. S. Adams, "Directional Bias in Intra-Urban Migration," Economic Geography, Vol. 45, 1969, pp. 302-323; Brown and Holmes, op. cit.; W. A. V. Clark, "A Test for Directional Bias in Residential Mobility," in H. McConnell and D. Yaseen (eds.), Perspectives in Geography: Models of Spatial Variation, Dekalb, Northern Illinois University Press, 1971, pp. 1-27; B. Greer-Wootton and G. M. Gilmour, "Distance and Directional Bias in Migration Patterns in Depreciating Metropolitan Areas," Geographical Analysis, Vol. 4, 1972, pp. 92-97; and J. S. Whitelaw and S. Robinson, "Directional Bias in Intra-Urban Migration," New Zealand Geographer, Vol. 28, 1972, pp. 181-193.

²⁸In particular see L. A. Brown and E. G. Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, Series B, Vol. 52, 1970, pp. 1-13; and J. Silk, Search Behavior: General Characterization and Review of Literature in the Behavioral Sciences, Geographical Paper No. 7, University of Reading, 1971, 32 pp.

²⁹For a review of this development see R. G. Golledge, L. A. Brown and F. Williamson, "Behavioral Approaches in Geography: An Overview," The Australian Geographer, Vol. 12, 1972, pp. 59-79.

economics-based geographic postulates.³⁰ Johnston has summed up the essence of this methodological reorientation with the observation that it represents a turning "from economics to psychology for inspiration."³¹ As Golledge *et al*³² point out, this is not to claim that until recently geographers have been completely oblivious to problems of human behavior, for as they note, some previous studies of human movements and the actions of man in primitive society could be characterized as being oriented towards the analysis of human behavior. These studies, however, focussed on the overt act of behaving, whereas the present approach highlights the various decision processes which underly spatial behavior.³³

In the case of migration research, interest in the behavioral approach derives largely from a theoretical paper by Wolpert, in which the decision to migrate was conceptualized in terms of "place utility."³⁴ As defined by Wolpert, the term refers "to the net composite of utilities which are derived from the individual's integration at some position in space;"³⁵ or more simply, an individual's personal

³⁰See A. Pred, Behavior and Location, Part 1, Lund, Gleerup, 1972, 128 pp.

³¹R. J. Johnston, "Continually Changing Human Geography: A Review of Some Recent Literature," New Zealand Geographer, Vol. 28, 1972, p. 80.

³²Golledge, Brown and Williamson, op. cit., p. 60.

³³Loc. cit.

³⁴J. Wolpert, "Behavioral Aspects of the Decision to Migrate," Papers of the Regional Science Association, Vol. 15, 1965, pp. 159-169.

³⁵Ibid., p. 162.

evaluation of the attractiveness or unattractiveness of a location relative to other locations. If a household experiences sufficient disutility from residing at a particular location, it is hypothesized that the household will consider moving.

Brown and Moore subsequently incorporated the concept into a two-phase model of the intra-urban residential location decision process.³⁶ Phase I - The Decision to Seek a New Residence - is a stress-strain sub-model based upon a household's existing place utility, while Phase II - The Relocation Decision - is a search and evaluation model.

This second phase was formally structured in terms of a number of additional conceptual constructs. Thus, it was hypothesized that, having made the decision to move, a household then explicitly defines its housing requirements. These requirements constitute the household's "aspiration region" and act as criteria for evaluating vacancies. The actual spatial search for a new dwelling is seen as being confined within a household's "awareness space," which in turn is the sum of a household's "direct" and "indirect contact spaces."³⁷ The housing information utilized by a household is said to be a function of the household's aspiration region, its awareness space, the spatial biases of information channels, the time available to find a

³⁶ Brown and Moore, op. cit.

³⁷ The term "awareness space" refers to those parts of the urban area about which the intended migrant household has some knowledge before search begins. This knowledge may be gained through day-to-day activities (direct contact) or second hand (indirect contact) from such sources as friends and mass media. See Brown and Moore, op. cit., pp. 7-8.

dwelling, the cost and effort involved, and the household's subjective evaluation of the likelihood of success resulting from the use of a particular information source. Finally, several ultimate courses of action are considered possible in the search phase. The finding of a vacancy with improved place utility will likely lead to a decision to relocate. Alternatively, initial lack of success in searching may force adjustment in situ, or a revision of the aspiration region, and/or a widening of the research space and/or an increase in search effort until a new dwelling is found.

Fitting existing geographical studies to the behavioral framework formulated by Brown and Moore reveals an unequal allocation of research effort. Attention has tended to focus on the two poles of the relocation process - the causative factors behind the decision to move from the origin location and the reasons for selecting the destination residence; but even so, considerable work remains to be done on these topics.³⁸ The sequence of decision-making processes falling between these two behavioral extremities have received comparatively little attention. Brown, Horton and Wittick,³⁹ and Brown and Longbrake⁴⁰ have made preliminary investigations of place utility

³⁸See R. R. Boyce, op. cit.; W. A. V. Clark, "Measurement and Explanation in Intra-Urban Residential Mobility," Tijdschrift Voor Econ. En Soc. Geografie, Vol. 61, 1970, pp. 49-57; and R. J. Pryor, "Urban Fringe Residence: Motivation and Satisfaction in Melbourne," The Australian Geographer, Vol. 11, 1969, pp. 148-156.

³⁹L. A. Brown, F. E. Horton and R. I. Wittick, "Place Utility and the Normative Allocation of Intra-Urban Migrants," Demography, Vol. 7, 1970, pp. 175-183.

⁴⁰L. A. Brown and D. B. Longbrake, "Migration Flows in Intra-Urban Space: Place Utility Considerations," Annals of the Association of American Geographers, Vol. 60, 1970, pp. 368-384.

functions, but only at the aggregate census tract level and in a simple origin-destination framework. Brown and Moore⁴¹ note that Rossi has provided some interesting insights on the information channels used by households searching for alternative accommodation, but few geographers have followed up this aspect of the intra-urban migration process. Those geographical migration studies which have viewed residential flows in terms of information availability have concentrated on the concept of mean information fields rather than on the content and uses made of specific residential information channels.⁴²

Finally, and almost certainly the most neglected facet of residential mobility research, is the field of household search behavior in intra-urban space. A number of writers have drawn attention to the importance of the subject, but to the author's knowledge there are presently only two published papers reporting empirical investigations of the purely geographical dimensions of migrant search

⁴¹ Brown and Moore, op. cit., p. 9. Geographical investigations of information flows have tended to concentrate on spatial diffusion processes. For example see L. A. Brown, Diffusion Processes and Location: A Conceptual Framework and Bibliography, Philadelphia, Regional Science Research Institute, Bibliography Series No. 4, 1968, 177 pp.; P. R. Gould, Spatial Diffusion, Commission on College Geography, Resource Paper No. 4, Washington, Association of American Geographers, 1969, 72 pp.; and T. Hagerstrand, "Aspects of the Spatial Structure of Social Communication and the Diffusion of Information," Papers and Proceedings of the Regional Science Association, Vol. 16, 1966, pp. 27-42.

⁴² For instance see W. A. V. Clark, "Information Flows and Intra-Urban Migration: An Empirical Analysis," Proceedings of the Association of American Geographers, Vol. 1, 1969, pp. 38-42; and R. L. Morrill and F. R. Pitts, "Marriage, Migration and the Mean Information Field," Annals of the Association of American Geographers, Vol. 57, 1967, pp. 339-361.

behavior.⁴³

INTRAB-URBAN MIGRATION RESEARCH CONDUCTED OUTSIDE GEOGRAPHY

Although of comparatively recent interest to geographers, the field of intra-urban residential mobility has received considerable attention from other disciplines. From the early 1920s until the mid-fifties, particularly keen interest was shown by sociologists, human ecologists, and social psychologists. Some of the major research themes which were pursued were:

1. the discernment and explanation of different rates of migration within and between the areal subdivisions of a city.
2. the migration rates of different sections of the population.
3. the correlation of migration rates with areally associated factors.
4. the causal factors responsible for migration.
5. the various social and socio-psychological

⁴³L. A. Brown and J. Holmes, "Search Behavior in an Intra-Urban Migration Context: A Spatial Perspective," Environment and Planning, Vol. 3, 1971, pp. 307-326; and J. S. Whitelaw and J. S. Gregson, Search Procedures in the Intra-Urban Migration Process, Monash Publications in Geography No. 2, 1972, 35 pp.

effects of migration.⁴⁴

Economists, urban planners and representatives from associated disciplines have also brought their different perspectives to bear on the general field of residential mobility. From the consumer viewpoint, several studies have investigated various aspects of household moving behavior and residential choice.⁴⁵ Meanwhile, others have approached the subject in terms of the role of the housing producer - the activities of whom create opportunities for migration -

⁴⁴ Representative of these studies were: W. Albig, "The Mobility of Urban Populations," Social Forces, Vol. II, 1933, pp. 351-367; T. Caplow, "Incidence and Direction of Residential Mobility in a Minneapolis Sample," Social Forces, Vol. 27, 1949, pp. 413-417; A. W. Lind, A Study of Mobility of Population in Seattle, Seattle, University of Washington Publications in the Social Sciences, 1925, 70 pp.; R. D. McKenzie, The Neighbourhood: A Study of Local Life in the City of Columbus, Ohio, Chicago, University of Chicago Press, 1923, 122 pp.; Rossi, op. cit.; and K. Young, J. L. Gillan and C. L. Dedrick, The Madison Community, Madison, University of Wisconsin Studies in the Social Sciences and History, No. 21, 1934, 229 pp.

⁴⁵ See for example E. W. Butler et al, Moving Behavior and Residential Choice: A National Survey, National Cooperative Highway Research Program Report No. 81, Washington, Highway Research Board, 1969, 129 pp.; S. D. Clark, The Suburban Society, Toronto, University of Toronto Press, 1966, 233 pp.; and N. N. Foote et al, Housing Choices and Constraints, New York, McGraw Hill, 1960, 453 pp.; D. J. Hempel, "Search Behavior and Information Utilization in the Home Buying Process," in P. R. McDonald (ed.), Marketing Involvement in Society and the Economy, Proceedings of the 1969 Conference of the American Marketing Association, 1970, pp. 241-249; L. K. Loewenstein, The Location of Residences and Workplaces in Urban Areas, Scarecrow Press, New York, 1965, 331 pp.; W. Michelson, "Environmental Choice," unpublished draft manuscript, 1972, 504 pp.; C. Werthman, J. Mandel and T. Dienstfrey, Planning and the Purchase Decision: Why People Buy in Planned Communities, University of California, Berkeley, Institute of Urban and Regional Development, 1965, 215 pp.

and the overall operation of the housing market.⁴⁶

THE RESEARCH PROBLEM

Two points in particular emerge from the literature on intra-urban migration. Firstly, it is clear that residential mobility is universally accorded as being one of the major processes of urban spatial change. Secondly, and somewhat surprisingly, it is also apparent that comparatively little geographic research has been undertaken on this type of migration.

In the case of Edmonton, very little information is available on residential movements.⁴⁷ Interviews with municipal and real estate officials failed to unveil any detailed statistical data readily available to researchers interested in studying migration flows within the urban area. The absence of such a data base has no doubt in turn discouraged the undertaking of related research on the many significant spatial aspects of migration behavior.

⁴⁶See W. G. Grigsby, Housing Markets and Public Policy, Philadelphia, University of Pennsylvania Press, 1963, 346 pp.; E. J. Kaiser, "Locational Decision Factors in a Producer Model of Residential Development," Land Economics, Vol. 44, 1968, pp. 351-362; and S. F. Weiss et al, Residential Developer Decisions, Chapel Hill, University of North Carolina Institute for Research in Social Science, 1966, 94 pp.

⁴⁷Some survey studies conducted by local municipal authorities have included questions on mobility, but there has been no systematic attempt to investigate residential flows within the urban area. The limited information on Edmonton migration generally relates to movement to the city. For example, see M. King, "Some Aspects of Post-War Migration to Edmonton, Alberta," unpublished M. A. thesis, University of Alberta, 1971, 169 pp.; and Human Resources Research Council of Alberta, "The Lowdown: Survey Reveals Hard Facts About Calgary and Edmonton," Inform, Vol. 3, 1971, pp. 1-7. This article reports the main findings of a study by F. Sukdeo, "Adjustment of Immigrants and Inter-Provincial Migrants in Alberta." King's thesis is also based on data from this study.

This study is selective in nature. No attempt has been made to provide an all-inclusive account of intra-urban migration in the Edmonton area. Rather, the objective has been to focus on selected geographic aspects of residential mobility considered by the author to warrant close investigation. In this respect, two general themes are examined. These themes follow from the research lacunae noted in the preceding literature review.

The first theme relates to the spatial patterning of intra-urban migration. Despite the considerable attention they have already received from researchers, such topics as migration rates, distances, and sectorality still hold a number of unresolved issues. The present study attempts to contribute to the clarification of some of these issues. Some of the questions examined are: In exactly what manner do mobility rates vary throughout the urban area? To what extent are intra-urban movements spatially biased? Do different locational groups of movers display differing degrees of bias in their movements? The analyses undertaken within the bounds of this first theme are also seen as serving somewhat of a scene-setting function for the remainder of the thesis.

The second theme concerns the spatial dimensions of the residential relocation decision-making process.⁴⁸ In particular,

⁴⁸Most of the analyses presented consider mover households in terms of their intra-urban residential location and tenure status. The latter dimension has been included largely for purposes of comparison with the residential location factor. Past research has shown that geographic, socio-economic, socio-psychological, and life-cycle factors are all of importance in explaining various aspects of intra-urban migration. However, consideration of all such factors was beyond the scope of this study. Consequently, tenure status was chosen as it has been shown to be among the more important variables related to mobility.

attention is focussed upon the factors prompting residential changes, the aspiration sets of mover households, information flows, the factors associated with the choice of the destination dwelling, and household search spaces. Specific questions considered include: Exactly why do households change residences? Once households decide to move, what aspirations do they set themselves to obtain? What use is made of the various residential information sources? In what ways and to what extent are information sources differentially biased? What are the most important criteria in the final dwelling choice? Are search activities completely confined within household awareness spaces? To what degree are search spaces biased? Do search spaces vary according to household circumstances?

ORGANIZATION OF THE THESIS

The physical organization of the thesis is as follows. Chapter II summarizes the research methodology and data employed in the study. Chapter III examines selected spatial components of residential mobility patterns in the study area. Mobility rates, distance biases, directional biases and sectoral biases are each analyzed within the general context of intra-urban migration theory. Attention shifts to the household relocation decision-making process in the remaining chapters.⁴⁹ Chapters IV, V, VI, VII and VIII respectively cover reasons for moving, household aspirations, information

⁴⁹The data for the decision-making analyses were obtained by means of an interview survey of selected mover households. Characteristics of the sampled households relevant to these analyses are outlined in Appendix B. The reader is recommended to refer to this appendix before reading Chapters IV-VIII.

gathering, destination choice factors, and household search spaces. The final section of the thesis, Chapter VIII, synthesizes the study's findings and draws several implications for future research.

Chapter II

METHODOLOGY AND DATA

This study is chiefly based upon migration data obtained from telephone directories and a questionnaire survey of selected mover households. Supplementary information on specific aspects of the research problem was obtained from commercial directories, local realtors, city officials, other urban researchers, and personal field observations. The principal methods and problems of the data collection are discussed in this chapter.

DIRECTORY DATA

As noted in the Introduction, the study focusses on two themes: the spatial patterning of intra-urban migration and the residential relocation decision-making process. The dual themes made necessary two stages of data collection: firstly, an enumeration of the population of mover households by origin and destination residential locations to provide the data for the examination of the spatial patterning of mobility; secondly, a questionnaire survey of selected mover households to obtain the data for the relocation decision-making analyses. Obtaining the origin-destination data base proved to be a major problem. When the study was first being contemplated, Post Office change-of-address records, utilities records, and telephone subscriber record cards were viewed as being potentially fruitful data sources. However, subsequent investigation revealed each of these sources to be either inaccessible or unsatisfactory. The lack of direct movement data finally prompted the decision to use Edmonton

Telephones' 1970 and 1971 subscriber directories as the data sources for the required origin-destination information.¹

Comprehensiveness

Like most telephone companies, Edmonton Telephones annually publishes a directory of subscribers, the "cut-off" date for inclusion in any one year's directory being mid-November of the preceding year. Although a laborious task, it is possible, by comparing the entries in directories for consecutive years, to identify a large proportion of the total volume of intra-urban migration for the one-year period. It was recognized from the outset that directories would not furnish a total accounting of residential shifts. For example, reliance on directories automatically excluded the following categories of movers from being identified.

- (a) Residential movers without telephones.
- (b) Residential movers with "silent" telephone numbers.
- (c) Persons who left a household after the cut-off date for the 1970 directory to establish a new household.
- (d) Persons who arrived in Edmonton after the cut-off date for the 1970 directory and who subsequently moved within the city before the cut-off date for the 1971 directory.

¹ Edmonton Telephones, Edmonton and Vicinity Telephone Directory, Edmonton, Edmonton Telephones, 1970, 600 pp.; and idem, Edmonton and Vicinity Telephone Directory, Edmonton, Edmonton Telephones, 1971, 624 pp.

(e) Repeated movers: only the move from the 1970 directory address to the listed 1971 residence could be discerned. All the intermediate moves were obviously untraceable.

In earlier decades, the chief criticism levelled against the use of telephone directories as sources of intra-urban migration data was that the telephone was a luxury household appliance and thus any directory-derived movement data was socially, economically, and spatially biased. This criticism obviously holds for many countries, but has little weight as regards North American urban society where the telephone has become a virtually ubiquitous household item. Support for this contention of ubiquity was obtained from a survey of the occupied dwelling units along every tenth street (35, 45, . . . 165) and avenue (39, 49, . . . 149) in Edmonton.² This survey revealed 91.8 per cent of the 10,225 enumerated dwelling units to have telephones.

Comparison of the 1970 and 1971 telephone directories resulted in the identification of almost 14,000 intra-urban movements (Table 1). The intra-urban spatial matrix was defined as consisting of Edmonton City, and the adjacent satellite communities of St. Albert, Spruce Grove, and Sherwood Park. The latter three centers, though

²The initial street and avenue to be sampled were chosen randomly. The data source for this survey was: Henderson Directories Limited, Henderson's Greater Edmonton Directory, Part III, Directory of Householders, Street and Avenue Guide, 1970, Winnipeg, Henderson Directories Limited, 1970, 289 pp. No official data were available on the proportion of households in the Edmonton area which have telephones.

TABLE 1

ORIGINS AND DESTINATIONS OF INTRA-URBAN
MIGRATIONS, EDMONTON 1970.^a

Origin Zones ^b	Destination Zones				Totals
	Inner	Middle	Outer	Satellites	
Inner	2,261	1,165	698	147	4,271
Middle	1,085	2,843	1,561	298	5,787
Outer	377	751	2,128	322	3,578
Satellite	13	22	38	163	236
Totals	3,736	4,781	4,425	930	13,872

^aIt should be emphasized that this flow matrix simply refers to telephone subscribers listed at different addresses in the 1970 and 1971 telephone directories. The data should not be used to infer net population change within the various zones or the urban area as a whole as, besides not indicating the number of persons involved in each move, the tabulations do not include new household formations or in-migrants to the Edmonton area.

^bSee pp. 29-30 for an outline of the procedure followed to delimit the inner, middle, and outer zonal framework.

Source: Edmonton Telephone Directories 1970, 1971.

not spatially contiguous with the city, were included for several reasons. Firstly, informal discussions with realtors, municipal officials and citizens indicated that most people thought of the Edmonton urban area migration system as encompassing these communities. Secondly, all three are nested within Edmonton City's laborshed. Thirdly, they all had populations in excess of 1,000 and could therefore be considered as "urban places." Finally, and allowing these other considerations to be acted upon, was the fact that all three communities were listed in Edmonton Telephones' directories.

Unfortunately, lack of information regarding the

cumulative numerical magnitude of the various movement omissions prevents a precise assessment of what proportion of the total volume of intra-urban movement the 13,872 moves represented. However, an indirect estimate is possible. Computed mobility rates per 100 telephone subscribers in the inner, middle, and outer zones of the city were found to be 20.6, 10.8, and 7.8, respectively.³ Meanwhile, data collected in the course of a recently completed investigation of processes of residential conversion in Edmonton indicated there were approximately 26,340, 57,450, and 51,800 dwelling units in the respective zones as of July 1, 1971.⁴ If the following assumptions are made:

1. the number of households equals the number of dwelling units,⁵ and
2. in the case of each zone, the mobility rates of non-subscribers and unlisted subscribers are the same as those of listed telephone subscribers,

it can be calculated that the above zonal mobility rates and numbers of dwelling units would cumulatively produce approximately 15,700

³See Chapter III, Table 4.

⁴L. D. McCann, "Changing Morphology of Residential Areas in Transition," unpublished Ph. D. dissertation, University of Alberta, 1972, 230 pp.

⁵By census definition, the number of occupied dwellings and the number of households are the same. Thus the total number of dwellings will slightly outnumber households due to the existence of some unoccupied units. See Dominion Bureau of Statistics, Population and Housing Research Memorandum, PH-Gen-6, 1971 Census Methodology, Ottawa, Dominion Bureau of Statistics, 1971, pp. 3-5.

household moves. Actual directory derived movements, though, amounted to only 88 per cent of this figure and, thus, it may be crudely inferred that the 12 per cent negative deviation represents mover household omissions stemming from the use of the telephone directories. Having established this figure, it is necessary to state that the actual deviation is probably closer to 20 per cent as intuitively one would suspect persons without telephones to have fewer ties to a dwelling and thus to be more mobile. Also, as noted above, the directory data make no allowance for multiple moves by the same household.

Validity

To check the validity of the directory-derived data, a 10 per cent systematic sample was drawn from the universe of movers identified.⁶ Three methods were used in this check. Firstly, a move was confirmed as valid if the mover had the same telephone number at his new 1971 address. Secondly, those moves which were not verifiable in this manner were checked by comparing household information in the 1970 and 1971 Henderson's Directories. Finally, those moves which remained unconfirmed were checked by personal telephone inquiry. The results of the testing are given in Table 2.

In relation to the general question of validity, brief mention may be made of the decision to limit the study to a one-year period. From the viewpoint of the objective of studying the overall

⁶This 10 per cent sample was also used as the data base for the analyses of migration distance, sectoral, and directional biases in Chapter III. The zonal origins and destinations of these moves are presented in Appendix C, Table 1.

TABLE 2

VALIDITY OF DIRECTORY DERIVED DATA

Confirmed Moves	Incorrect	Unconfirmable	Total
1,332	31	27	1,390

flow pattern, it would have been desirable to compare several directories. However, the amount of time consumed undertaking the 1970-1971 comparison made a longer term study infeasible. At the same time, restricting the study to the most recent one-year period for which directories were available undoubtedly eliminated many problems of information recall which would likely have arisen in the questionnaire survey if a wider time span had been adopted.

QUESTIONNAIRE SURVEY

Areal Framework

The data for the examination of the residential relocation decision-making process was obtained by means of a questionnaire survey of a sample of mover households randomly selected from the list of movers identified in the directory comparison. Recent research has suggested the importance of residential location as an explanatory variable regarding human spatial behavior within urban areas, and as it was specifically intended to examine some of these behavioral propositions, an areally stratified sample based on

pre-move residential location was drawn.⁷

Three areal strata were chosen: inner city, middle suburban, and outer suburban.⁸ Some investigations have only chosen to study inner city and outer suburban residents. However, in most cities the residential environment of the middle zone suburbs differs considerably from those of the inner and peripheral zones and, therefore, it was thought preferable to use a three-fold zonation.⁹ The actual physical delineation of the city into three zones, however, proved to be a problem. Age and type of buildings were each considered as possible classificatory criteria, but neither possessed the spatial consistency needed to yield a functional zonation. Isochrones were also tested, but were found to be unsatisfactory.

Finally, in the absence of any other suitable criteria, simple linear distance was used to delimitate a zonal framework. Experimentation with concentric rings of varying radii centered on the

⁷ For example see L. A. Brown and J. Holmes, "Intra-Urban Migrant Lifelines: A Spatial View," Demography, Vol. 8, 1971, pp. 103-122; L. A. Brown and E. G. Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, Series B, Vol. 52, 1970, pp. 1-13; and F. E. Horton and D. R. Reynolds, "Action Space Differentials in Cities," in H. McConnell and D. Yaseen (eds.), Perspectives in Geography: Models of Spatial Variation, Dekalb, Northern Illinois University Press, 1971, pp. 84-102.

⁸ Migrant households which originated in the three satellite centers were excluded from sampling consideration due to the limited number of such households. The sample was thus based on the 13,636 households which moved from a dwelling within Edmonton City.

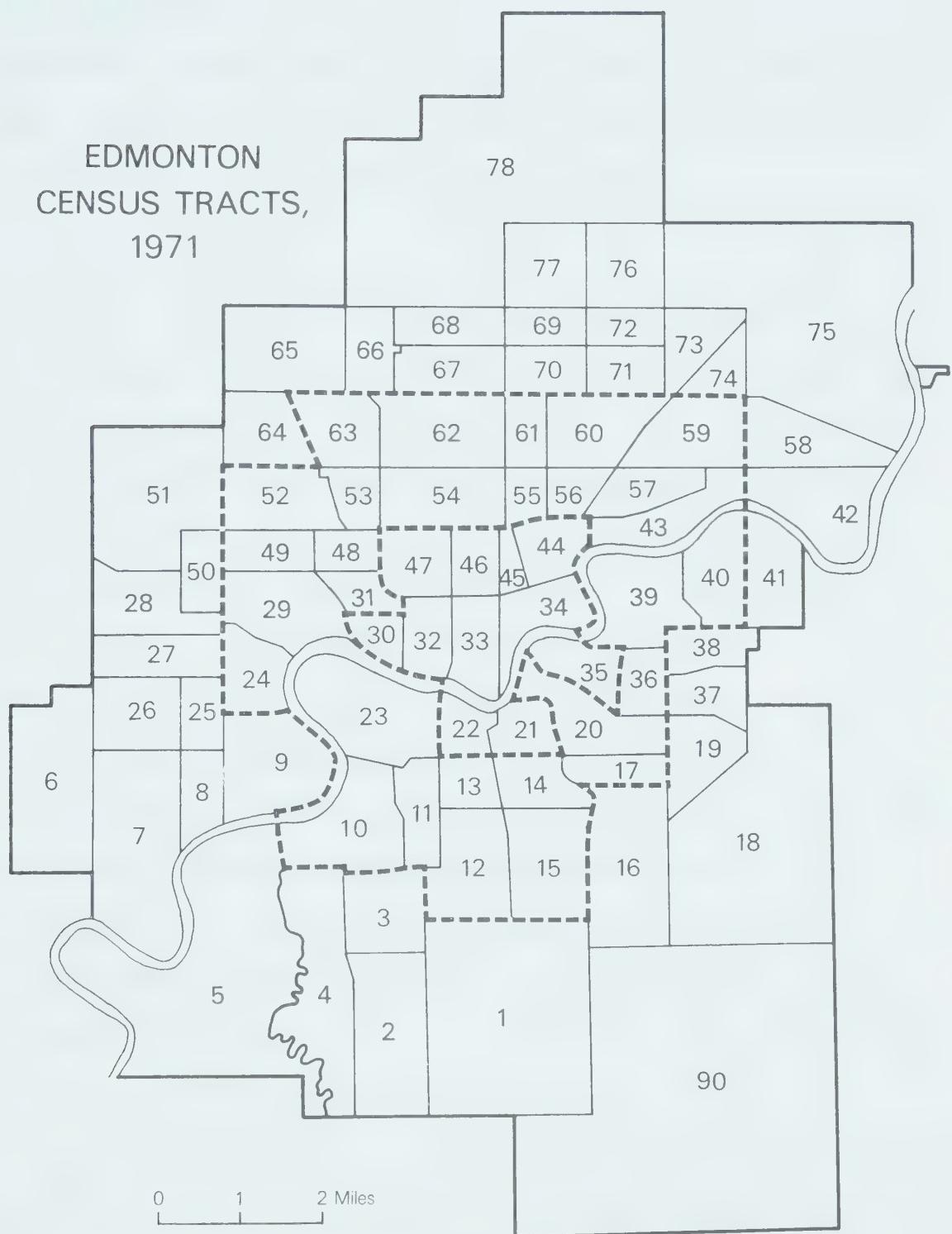
⁹ On this point see J. Abu-Lughod and M. M. Foley, "Consumer Strategies," in N. N. Foote et al, Housing Choices and Housing Constraints, New York, McGraw Hill, 1960, pp. 77-82.

Peak Value Intersection (P. V. I.),¹⁰ in conjunction with field observation, led to the adoption of a three-fold concentric zonal framework with radii of the order 1:2:3, respectively. These concentric rings were fitted to the city's 1971 census tract boundaries. Census tracts which straddled a zonal boundary were included in the zone in which the greater part of their built-up area was located. Minor modifications also had to be made to allow all three zones to be fitted to the eastern side of the city. Irregular shapes and discontinuities in their built-up areas posed problems in the case of a few census tracts, but these also were of relatively minor importance. The zonation thus arrived at is presented in Figure 1.

Sample Size

Determination of the sample size involved, as is frequently the case in survey research, both considerations of statistical reliability and available resources. Resource factors ruled out adherence to the 10 per cent and 25 per cent rules of thumb variously referred to by geographers, while considerations of sampling error imposed a minimum limit on sample size. A constant sampling fraction of one-fortieth was finally selected. This yielded a total sample

¹⁰The Peak Value Intersection (P. V. I.) is used as a spatial orientation node in several parts of this study. As the Central Business District (C. B. D.) is generally the one part of a city with which most residents are familiar, it has been used as a basic reference node in several intra-urban migration studies. Where precise measurements are to be made relative to the C. B. D., a specific point within the C. B. D. needs to be identified. In this respect, the P. V. I. is a useful standard reference point.



Source: Dominion Bureau of Statistics.

Zonal boundaries -----

Figure 1

of 342 households.¹¹ A random number table was used to draw the 342 member sample. At the same time, a contingency sample of the same size was drawn to allow persons not wishing to be interviewed and those not able to be contacted to be replaced.¹²

Questionnaire Format

Questionnaire surveys have long been a staple tool of the migration researcher, the common procedure having been to conduct the survey sometime after the occurrence of the migratory events under investigation. Yet, retrospective examination of the behavioral dimensions of migration, while operationally attractive and indeed frequently dictated by circumstances, poses numerous problems to the researcher. For example, responses to such questions as "Why did you move?" and "Why did you choose this location?" are liable to reflect present rationalizations rather than those held at the time of actual relocation. In addition, the retrospective approach inevitably suffers from problems of information recall. In order to minimize these problems, the questionnaire was consciously structured to recreate, in as far as was possible, the entire relocation decision-making process and the residential environment in which the process occurred.

¹¹The sampling error of a sample of this size is 6 per cent (95 per cent confidence level) and 7 per cent (99 per cent confidence level).

¹²Eighty-three households had to be drawn from the contingency sample to replace 34 households which had moved again, 31 householders who were not at home when called upon, and 18 refusals. The zonal origins and destinations of the 342 surveyed households are given in Appendix B, Table 3.

One set of questions dealt with the various aspects of the respondents' pre-move residential experiences in Edmonton; a second group investigated factors surrounding the decision to move; a third group concerned the residential aspirations of mover households; a fourth set examined selected facets of search behavior and evaluation procedures; a fifth group related to future movement intentions; while a final set was designed to establish the socio-economic characteristics of the mover households at the time they moved.¹³

Both open-ended and closed questions were used. The respective rationales for the two types of questions are well known and will only be treated briefly here. The principal advantage of the open-ended format is that it draws forth spontaneous, non-directed responses from the interviewees. Closed questions, on the other hand, are easier and quicker to answer and yield standardized data more amenable to quantification. For retrospective migration studies, closed questions offer the additional advantage of offsetting some of the problems of information recall stemming from the time lag between the time of moving and the questionnaire survey. In a number of cases, a question was asked in open form and then redirected in closed form in order to derive the benefits of both formats. Meanwhile, in other instances, pre-coded questions were followed up by open-ended "why" questions.

¹³Several questions were included for the purpose of obtaining data for a report for the Real Estate Research Committee, University of Alberta, and have not been used in this thesis.

Implementation of Survey

A preliminary draft of the questionnaire was formulated and pretested in the field by the author. Problems detected in this trial led to substantial modifications to the questionnaire in the form of question ordering, rewording, additions, and deletions. Testing of the revised schedule by the author led to further minor modifications, principally in the realm of rewording. The actual survey was conducted by the author and four hired interviewers over the summer months of 1972. The purpose of the study, in general, and the questionnaire, in particular, was explained to the interviewers. Each interviewer was then required to conduct five test interviews in order to gain familiarity with the questionnaire schedule and to overcome any difficulties found to be associated with its implementation.

To encourage favorable citizen response, an introductory letter explaining the purpose of the survey was sent to the selected households. In addition, the Better Business Bureau and the University of Alberta Public Relations Office were informed of the study in anticipation of inquiries regarding the validity of the study from some householders.

The major problem encountered in the implementation of the survey was that of finding householders at home. This problem was undoubtedly accentuated by the fact that the survey was conducted during the summer; a winter survey would almost certainly have eliminated the greater part of this problem. To meet this situation, a one call-back system was followed. If contact was not made on the second attempt, the household was replaced by the next one on the contingency list. In common with most surveys of this type, refusals to cooperate

were met with, but fortunately such responses were few in number.

On the whole, the survey was successful in eliciting the desired data. Question 28 proved to be the only unsatisfactory question, in so far as the information it sought proved to be too detailed for most respondents to recall. In the case of Question 25, many respondents were unable to remember the order in which they had inspected vacancies, but they were able to recall the other information relevant to the question. Overall, however, difficulties of information recall did not prove to be as big a problem as had been anticipated.

OTHER DATA SOURCES

Supplementary information relevant to the research problem was obtained from various sources. Informal discussions with municipal officials and realtors provided useful insights into several problems in the early stages of the research. A postal questionnaire survey of a sample of city realtors was conducted to obtain knowledge of realtor residential real estate activities and specializations. Numerical street address and commercial directories, field investigations and fellow students also contributed information basic to the completion of the study.

Chapter III

SPATIAL DIMENSIONS OF INTRA-URBAN MIGRATION FLOWS IN EDMONTON

This chapter examines a number of hypotheses relating to the spatial dimensions of intra-urban migration. The rationale for these analyses principally rests on three considerations.

Firstly, it is hoped to provide useful perspectives on a number of unresolved issues surrounding migration rates and spatial biases. Repeated empirical investigations of migration patterns across the spectrum of urban settings are necessary for the successful resolution of these issues. Some researchers might claim that ample substantive research has already been conducted on these topics. Admittedly the literature contains many studies of residential mobility patterns, but numerous points remain unanswered and many others, at best, only partially answered.¹ Also, much of the research on intra-urban migration patterns was undertaken during the 1920s, 1930s, and 1940s, largely by researchers within the human ecology tradition of sociology.² While readily acknowledging the valuable substantive contribution to knowledge that these studies represent, it seems only reasonable to suggest that a spatial theory of residential mobility relating to North American-type urban areas of the 1970s should find its verification in contemporary empirical findings.

Secondly, it has been suggested that the low level of

¹ For example see the questions posed on p. 19.

² For a representative selection of these studies see p. 17, footnote 44, of this study.

explanation obtained in many past geographic migration studies has stemmed from the weak sampling frameworks employed.³ A frequent weakness has been the tendency to treat the mover population as a single body, ignoring its constituent spatial elements. Failure to incorporate meaningful stratification into sampling research designs has no doubt masked many significant spatial dimensions of intra-city migration flows and, even more seriously, has probably led to the acceptance of misleading conclusions.⁴

Finally, the analyses within this section are also seen as providing a necessary backdrop to the behavioral themes developed in later chapters, particularly as there are no alternative local studies which could fulfill this function.

³On this point see B. Greer-Wootton and G. M. Gilmour, "Distance and Directional Bias in Migration Patterns in Depreciating Metropolitan Areas," Geographical Analysis, Vol. 4, 1972, p. 92; and E. G. Moore, "The Nature of Intra-Urban Migration and Some Relevant Research Strategies," Proceedings of the Association of American Geographers, Vol. 1, 1969, p. 115.

⁴Having made this point, it is necessary to outline the procedure followed in the present study. As was stated in Chapter II, the data base for many of the analyses in this chapter consists of the 10 per cent migration sample originally drawn in order to check the reliability of the directory-derived data. This sample was taken and checked as soon as the directory comparison was completed. Only once the directory data had been proven reliable was it considered worthwhile going ahead and determining the origin and destination locations of each mover household. Consequently, at the time the sample was drawn, it was not possible to obtain an areally stratified proportionate random sample. However, once all the origin and destination locations had been registered, the sample moves were grouped into a zonal flow matrix. A chi-square goodness-of-fit test of the 10 per cent sample and total flow matrices revealed no significant differences between the two distributions (χ^2 9.991, 15 d.f. $P > .80$). In the light of this finding, the zonal grouping of the migration sample was retained and many of the questions examined in the present chapter are posed in terms of the zonal sub-groups, as well as for the total 10 per cent sample of mover households.

Four main issues are investigated. The first section of the chapter deals with the areal pattern of mobility rates. The following three sections, in turn, examine seven hypotheses regarding the distance, sectoral, and directional biases of intra-urban mobility.⁵ For convenience of reference, the research hypotheses are listed below.

Mobility Rates

H_1 : that the gross rate of mobility will decrease by concentric zones as one moves outwards from the city center.

Distance Bias

H_2 : that most moves will be short distance in nature.

H_3 : that residential movements originating in the inner city will display the greatest degree of distance bias and movements originating in the outer zone the least bias.

H_4 : that no differential distance bias will be found between inward and outward moves.

Sectoral Bias

H_5 : that intra-urban migrations will tend to show a sectoral bias based on the residence - Central Business District (C. B. D.) axis.

Directional Bias

H_6 : that the overall pattern of movement will be outward.

⁵"Distance bias describes the degree to which a single migration is more likely to end in a nearby place than in one more distant Directional bias describes the degree to which a single migration is more likely to end in a place that is in a particular direction from the origin Sectoral bias describes the degree to which a single migration is more likely to end in a place that is along a single axis through (or near) the origin." L. A. Brown and J. Holmes, "Intra-Urban Migrant Lifelines: A Spatial View," Demography, Vol. 8, 1971, p. 104.

H_7 : that the move angles ($\angle XOD$) of a representative sample of intra-urban movements will approximate a uniform distribution.

MOBILITY RATES

Research Hypothesis

H_1 : that the gross rate of mobility will decrease by concentric zones as one moves outwards from the city center.⁶

Hypothesis 1. It was noted in the introductory section of this study that the spatial patterning of intra-urban mobility rates has attracted the attention of numerous researchers. However, as the following comments will attempt to show, several points remain unresolved on this subject. The discussion is addressed to a conceptually simple question: namely, what overall trend in migration rates can be expected as one moves outward from a city center? While a simple question, it is nonetheless one of some theoretical and pragmatic significance and one for which no universally accepted answer is available.

In reality the problem actually assumes even simpler proportions, as past research has consistently shown inner city areas to experience the highest mobility rates.⁷ This finding has generally been explained in terms of changing residential requirements and preferences associated with progression through the family life cycle and

⁶The gross rate of mobility is defined as the total number of moves into, out of, and within a census tract, per 100 households resident in the tract.

⁷For a review of early research on spatial patterns of mobility rates see J. A. Quinn, Human Ecology, New York, Prentice Hall, 1950, pp. 381-389.

the structural components of the inner city housing market. Thus the high level of turnover in the central area is seen principally as a composite function of newly formed households flowing into the area, the outward movement of expanding families, and the continual intra-zonal ebb and flow of people taking advantage of their renter status and the large number of available dwelling units amongst which to obtain better accommodation. Therefore, accepting high inner area rates as given, the issue reduces to a consideration of mobility in the middle and outer zones.

Some researchers have claimed that middle suburbs have higher mobility rates than outer suburbs. Meanwhile, others have suggested exactly the opposite. Quinn, for example, reports that "unpublished studies in Cincinnati indicate that, on the average, the mobility rate decreases by concentric zones as one moves outward from the city center."⁸ A similar pattern is noted by Moore in a recent review paper.⁹ On the other hand, Abu-Lughood and Foley have stated that the middle parts of a city have lower levels of mobility than peripheral areas.¹⁰ Johnston has also concluded this to be the case in a recent study of intra-urban mobility in Melbourne.¹¹

⁸Quinn, op. cit., p. 388.

⁹E. G. Moore, Residential Mobility in the City, Commission on College Geography, Resource Paper No. 13, Washington, Association of American Geographers, 1972, p. 25.

¹⁰J. Abu-Lughood and M. M. Foley, "Consumer Strategies," in N. N. Foote et al, Housing Choices and Housing Constraints, New York, McGraw Hill, 1960, pp. 71-274.

¹¹R. J. Johnston, "Some Tests of a Model of Intra-Urban Population Mobility: Melbourne, Australia," Urban Studies, Vol. 6, 1969, pp. 34-57.

Having noted the two positions, it is contended that the zonal patterns of mobility rates hypothesized by Abu-Lughood and Foley, and Johnston, are open to argument. Both authors found their arguments upon the family life-cycle model of mobility and residential location. This model notes that the propensity to move is largely a function of the number of dependents in a household. Households comprising single adults or childless couples are generally faced with fewer impedimenta to moving than are families with children and, therefore, are more mobile than the latter group. Spatio-temporally, the family-cycle model postulates a series of residential shifts in a general outward direction, essentially in response to a family's changing housing needs and aspirations.¹² To quote Johnston:

It can be deduced from this family-cycle model that intra-city population mobility . . . should be greatest in the inner and outer parts of the city. Turnover is fast in the central area because of rapid changes in family needs, the constant search for something better . . . leases are generally short and rents high . . . Mobility in the outer suburbs will be relatively high . . . because of changes in family needs, in employment, in income and in aspirations. In the middle suburbs average turnover will be lower because families are generally static or declining in size, the peak in many careers will have been reached, and most will be living in satisfactory conditions.¹³

Shortly thereafter, Johnston makes the point that the family-cycle model is, in fact, largely a reformulation of Dewey's observation that ". . . persons who moved originally from the central part of the city reached the periphery via a series of short moves and not by a single

¹²The model is based on the notion of expanding family size and added living space requirements, and assumes that these requirements are most readily satisfied in the outer suburbs.

¹³Johnston, op. cit., p. 36.

move."¹⁴

However, if Dewey's conclusion is indeed the case, and past research suggests that it is, it becomes difficult to reconcile Johnston's initial research hypothesis that population mobility will be lowest in the middle-ring suburbs with his other propositions that (a) most movements within the urban area are over short distances, and (b) that the general migratory trend is outwards from the city center. Rather, it would seem more logical, given (a) and (b), to postulate that the overall level of mobility will be at least as high in the middle sections of a city as in peripheral areas.¹⁵

Abu-Lughod and Foley, and Johnston also seem to underplay the importance of the residential structure of the intermediate suburbs in encouraging population turnover. Besides being spatially intermediate between the inner and outer zones, it will be shown that the middle ring is also intermediate relative to the other rings along such dimensions as dwelling unit type and prevalent tenure system, variables which have been demonstrated to be closely related to population mobility. Numerous studies have revealed a strong

¹⁴R. Dewey, "Peripheral Expansion in Milwaukee County," American Journal of Sociology, Vol. 54, 1948, p. 120.

¹⁵It should be noted at this point that Johnston concluded that the Melbourne data verified his postulated pattern of mobility rates. Conclusive resolution of this apparent paradox would require detailed information on the social, economic, and physical dimensions of Melbourne's urban structure. However, it may tentatively be suggested that his findings reflect the fact that his index of mobility only considered movements into and within the study sectors. The sizes of the study sectors also appear significant. On the whole, the outer sectors were larger than the middle ones. Ceteris paribus, this differential would operate to make moves into and within the outer sectors relatively more likely than would be the case if the sectors were all of equal area.

negative relationship between mobility rates and the proportion of total dwellings which are single detached units.¹⁶ On the whole, such units are most suited to the requirements of families with children and, as has already been noted, households of this type are characterized by comparatively low levels of mobility. A similar inverse relationship has been shown to exist between mobility and the degree of home ownership in an area.¹⁷ For most households, the purchase of a dwelling places a variety of financial, legal, and psychological obstacles in the path of future mobility. Renters, on the other hand, face fewer obstacles of this nature and, therefore, are considerably freer to move from place to place. This owner:renter mobility differential also reflects the different range of corrective options open to owner and renter households in states of residential disequilibria; owners, by virtue of owning, generally have greater latitude to adjust their residential needs "in situ," than do renters. For the latter group, moving is usually the only viable course of action.

Table 3 summarizes several aspects of Edmonton City's residential structure using data aggregated from the 1966 Census of Canada to fit the zonal framework of the present study. Each of the variables in this table relates back to the preceding discussion, providing perspectives on the degree of family living, dwelling unit type, and degree of home ownership in the three zones. These data clearly

¹⁶For example see E. G. Moore, "The Structure of Intra-Urban Movement Rates: An Ecological Model," Urban Studies, Vol. 6, 1969, pp. 17-33; and P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, 220 pp.

¹⁷Loc. cit.

TABLE 3

SELECTED DIMENSIONS OF EDMONTON'S RESIDENTIAL STRUCTURE, BY ZONES, 1966

	Inner Zone	Middle Zone	Outer Zone
Percentage of Population 14 Years of Age and Under	19.8	30.7	42.3
Percentage of Population 15 and Single	28.9	18.7	11.6
Families as a Percentage of Households	56.3	85.6	96.6
Density of Dwellings per Unit Area	98.8	54.5	47.8
Percentage of Dwellings Single Detached	25.8	68.3	81.0
Percentage of Dwellings Owner Occupied	25.2	63.8	77.4

Source: Dominion Bureau of Statistics, Population Characteristics by Census Tracts, Edmonton, 1966, (Ottawa, 1968).

reveal the medial position occupied by the middle zone and, in the context of the foregoing review, suggest the research hypothesis (H_1).

Empirical Results

In order to test this hypothesis, it was necessary to obtain two sets of data: firstly, data on the universe of household residential movements within the Edmonton area; secondly, data on the population "at risk." The first set of data was obtained by means of the telephone directory comparison described in Chapter II. This comparison yielded information on the number of households moving into, within, and out of Edmonton City's 78 census tracts. Meanwhile,

the population "at risk," the denominator of the mobility rate, was calculated by allocating each of the 118,000 households listed in Edmonton Telephones' 1970 numerical street address directory to the census tract in which it was located.¹⁸ Having collected these data, mobility rates of the form

$$\frac{I + O + \text{Intra}}{P} \times 100$$

where:

I = household movements into a census tract

O = household movements out of a census tract

Intra = household movements within a census tract

P = households resident in census tract at beginning of year

were calculated for each of the city's census tracts (Table 4). The census tract data were also aggregated into the inner, middle, and outer zonal framework to produce overall zonal rates. The observed pattern of mobility rates by census tracts is cartographically portrayed in Figure 2.

Looking first at the zonal rates in Table 4, it can be seen that the data confirm the hypothesized pattern. As expected, the inner zone stands as having by far the greatest rate of population turnover. More significant, though, is the fact that the middle zone, albeit considerably less mobile than the central city, is nonetheless somewhat more mobile than the outer suburbs.

Naturally some of the spatial regularity in mobility

¹⁸Edmonton Telephones, Edmonton Street Address-Numerical Telephone Directory, January-June, 1970, Edmonton Telephones, 1970, 278 pp.

TABLE 4

MOBILITY RATES, EDMONTON, 1970

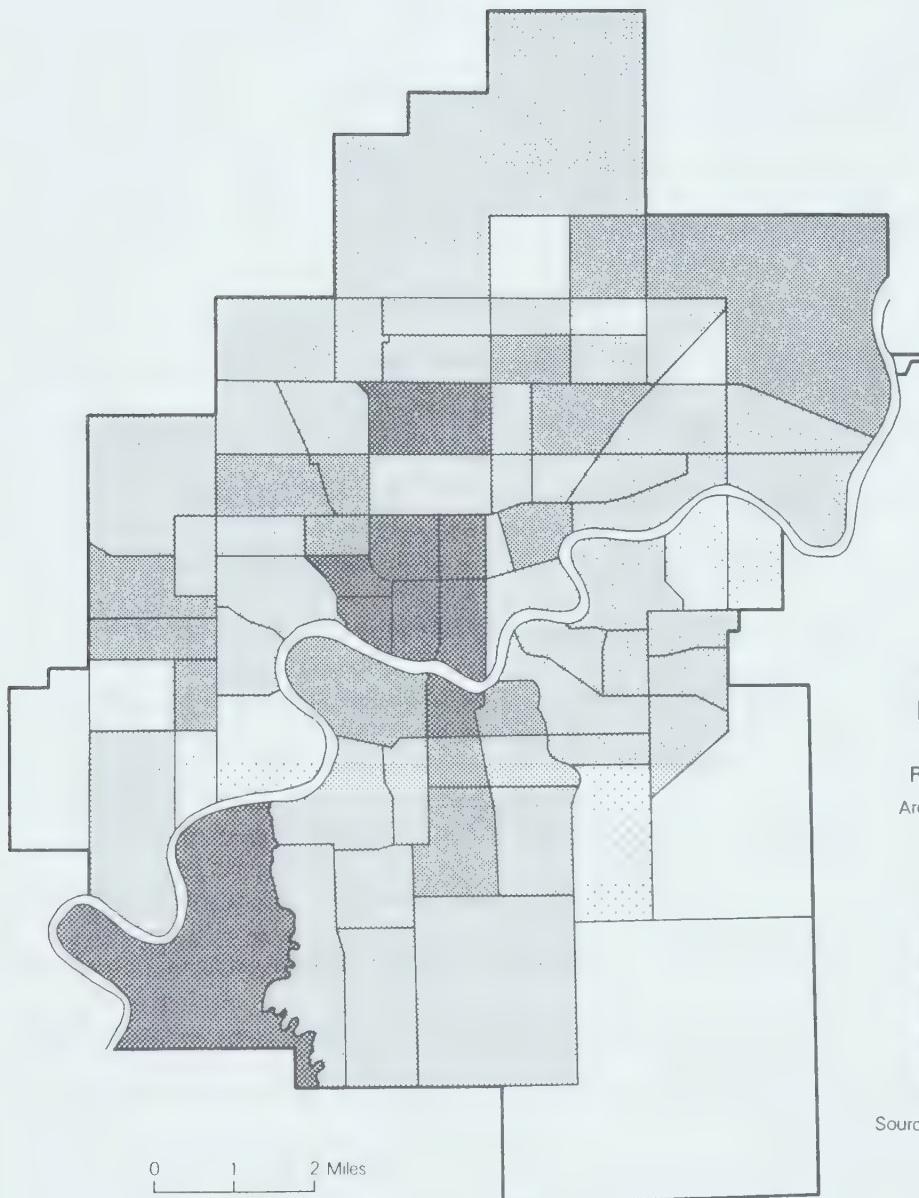
Census Tracts	No. of Households	No. of Moves ^a	Mobility Rate per 100 Households
Inner Zone			
21	2,307	668	28.9
22	1,695	673	39.7
30	1,587	584	36.8
32	3,074	1,045	34.0
33	2,384	723	30.3
34	1,967	389	19.8
35	1,452	223	15.3
44	1,978	570	28.8
45	966	180	18.6
46	1,844	664	36.0
47	2,463	877	35.6
Zone Totals	21,717	6,596	30.4
Middle Zone			
10	1,437	211	14.7
11	2,453	468	19.1
12	2,727	570	20.9
13	1,766	490	27.7
14	1,594	302	18.9
15	1,416	223	15.7
17	1,505	225	14.9
20	2,490	454	18.2
23	1,790	374	20.9
24	1,261	132	10.5
29	2,107	314	14.9
31	1,800	589	32.7
36	1,408	184	13.1
39	2,260	370	16.4
40	1,641	107	6.5
43	1,317	165	12.5
48	1,457	384	26.3
49	1,512	251	16.6
52	1,618	352	21.7
53	1,988	585	29.4
54	1,681	323	19.2
55	1,740	294	16.9
56	1,508	236	15.6
57	1,322	184	13.9
59	2,145	333	15.5
60	2,349	538	22.9
61	1,444	216	14.9
62	1,411	487	34.5
63	1,713	278	16.2
Zone Totals	50,860	9,639	18.9

TABLE 4 (CONTINUED)

Census Tracts	No. of Households	No. of Moves ^a	Mobility Rate per 100 Households
Outer Zone			
1	737	105	14.2
2	2,088	378	18.1
3	1,712	230	13.4
4	1,182	190	16.1
5	217	100	46.1
6	2	6	*
7	1,634	174	10.6
8	924	84	9.1
9	1,816	175	9.6
16	1,203	100	8.3
18	72	19	*
19	1,360	218	16.0
25	1,107	244	22.0
26	1,494	148	9.9
27	1,792	387	21.6
28	1,750	421	24.0
37	1,540	177	11.5
38	1,363	271	19.9
41	1,356	103	7.6
42	1,628	279	17.1
50	1,297	189	14.6
51	861	128	14.9
58	1,365	166	12.2
64	897	96	10.7
65	1,940	235	12.1
66	1,476	245	16.6
67	1,572	278	17.7
68	1,815	194	10.7
69	1,051	164	15.6
70	1,638	400	24.4
71	1,175	214	18.2
72	1,315	110	8.4
73	1,225	162	13.2
74	50	4	*
75	1,457	300	20.6
76	1,221	283	23.2
77	13	177	*
78	751	80	10.6
90	-	-	*
Zone Totals	46,096	7,234	15.7
Edmonton Totals	118,673	23,469	19.8

^aNumber of moves = moves into, within and out of a census tract.

Source: Edmonton Telephone Directories 1970, 1971.



MOBILITY RATES EDMONTON 1970

RATE per 100 HOUSEHOLDS

Areas with less than 100 households
at the beginning of 1970
are shown in white.

[Lightest shade box]	Less than 10.0
[Very light gray box]	10.0 – 19.9
[Moderately dark gray box]	20.0 – 29.9
[Darkest shade box]	30.0 and over

Source: *Edmonton Telephone Directories*
1970, 1971.

Figure 2

rates evident at the zonal level is lost when attention is turned to the census tract scale, as areally localized factors come into play. In a number of cases, these factors are sufficiently strong to reverse the overall middle:outer zonal relationship. For example, Census Tracts 75, 76, and 77, on the northern rim of the city, have substantially higher levels of mobility than some of the middle suburbs, reflecting the fact that new single-detached residential construction was largely concentrated in this part of the city during the study period. New construction, in conjunction with a small population base, produced a somewhat similar effect in Census Tract 5. In other cases, deviations from the expected pattern can be explained by reference to tenure patterns. Thus, Census Tracts 28 and 70, both of which have mobility rates considerably in excess of the outer zone average, are both also characterized by higher than average levels of renter occupancy. However, given these variations, the tract pattern of population turnover generally accords with the hypothesized concentric arrangement.

Finally, turnover within the satellite centers, though not included in the research hypothesis, deserves brief mention. Gross mobility rates were computed for Sherwood Park and St. Albert in the same manner as described for the census tracts and zones.¹⁹ The rate of turnover discerned in the two centers was 31.1 and 12.9, respectively, the difference between the two being almost purely a function of a far higher rate of in-migration to Sherwood Park.

¹⁹Rates were not calculated for Spruce Grove as no data were available on the population "at risk."

DISTANCE BIAS

Research Hypotheses

H_2 : that most moves will be short distance in nature.

H_3 : that residential movements originating in the inner city will display the greatest degree of distance bias and movements originating in the outer zone the least bias.

H_4 : that no differential distance bias will be found between inward and outward moves.

Hypothesis 2. Given the vagaries of human behavior, one of the closest approximations to a "law" of migration is that most moves tend to be short distance in nature. First expressly enunciated by Ravenstein, this tendency has since been observed by a host of researchers working at a variety of spatial scales.²⁰ At the intra-urban level, this phenomenon has traditionally been "explained" as reflecting such things as dissatisfaction with the previous dwelling unit but satisfaction with the general neighbourhood; the desire to minimize social dislocation when moving; a household distance decay function regarding knowledge of dwelling vacancies; familiarity with the local area, coupled with a motivation to reduce the amount of "perceived risk" involved in household relocation to an acceptable level. These considerations constitute the rationale for the research

²⁰E. G. Ravenstein, "The Laws of Migration," Journal of the Royal Statistical Society, Vol. 48, 1885, pp. 167-227. Also see G. Oisson, Distance and Human Interaction, Philadelphia, Regional Science Research Institute, Bibliography Series No. 2, 1965, 112 pp.; J. Wolpert, "Distance and Directional Bias in Inter-Urban Migratory Streams," Annals of the Association of American Geographers, Vol. 57, 1967, pp. 605-616; and J. S. Adams, "Directional Bias in Intra-Urban Migration," Economic Geography, Vol. 45, 1969, pp. 302-323.

hypothesis. The principal reason for taking the time to state and test this hypothesis is to safeguard against the offchance that a set of peculiarly local features are operating to produce a markedly atypical pattern of migration in Edmonton.

Hypothesis 3. The major concern of the present section is to disaggregate the mover population into its three zonal components and to examine the distance properties of each of the groups. Also, instead of concentrating on the traditional explanatory variables, attention is briefly directed to the causative roles of the spatial geometry of the city and areal variations in the density of dwelling units.

The areal dimensions of a city obviously impose finite limitations on the distances which households wishing to remain within the city can move. A logical derivative of this general observation is that the limitations will vary according to a household's pre-move residential location. Thus, households located at the geometric center of the city are most circumscribed as the radius of the city is the maximum linear distance they can move. In turn, middle zone residents are somewhat less circumscribed and outer zone residents least of all.

In order to give these statements quantitative expression, the maximum linear distance from each census tract to any other part of the city was calculated. These individual census tract distances were then aggregated to derive mean maximum possible migration distances for each zone. Using this procedure, it was calculated that the average maximum migration distance possible from inner zone census tracts is approximately 6.6 miles, from the middle zone tracts 7.9

miles, and from the outer zone tracts 9.5 miles. Naturally these averages depend to some extent on the zonal boundaries initially chosen, but they do illustrate the nature of the limitations imposed.

To conclude this particular line of discussion, it should be emphasized that it is not in any way suggested that the geometrical properties of city morphology are of prime importance in explaining the distribution of migration distances. Rather, the objective is simply to make the point that the spatial geometry of a city should not be ignored. Also of no little importance is the implication of the necessity to obtain an areally representative sample of mover households when examining the distance dimension of a total migration network. This latter point is returned to in the discussion of directional bias.

Another and rather more important factor influencing the distance dimension of intra-urban moves is the spatial pattern of dwelling unit density. If each dwelling unit is viewed as an opportunity (i.e., potential destination) then the greater the density of units in a particular area, the greater the level of opportunity in that area. Accordingly, it follows that the ability of households to relocate satisfactorily within a short distance of their origin will, in part, be a function of the areal pattern of density.²¹ Readers familiar with migration research will recognize this statement as being very akin to the Stoufferian formulation of intervening opportunities in which it is postulated that the number of migrants going a given distance is directly proportional to the number of opportunities at that distance and

²¹It will of course also be in part a function of the type of dwelling being sought.

inversely proportional to the number of intervening opportunities.²²

The intention here is not to check the validity of Stouffer's hypothesis. Rather, the concern is to obtain a quantitative estimation of the opportunity sets of households located in various parts of the city and, from these data, to derive the research hypothesis of zonally differentiated distance biases.

An estimate of household opportunity sets was arrived at in the following manner. Data on the number of dwelling units in each census tract of the city as of July 1, 1971, were made available to the author from a recently completed research investigation.²³ Adopting the simplifying assumption of a uniform density of dwelling units throughout the built-up area of each tract, the number of units located within a series of distance bands centered on the centroid of each tract's built-up area was calculated. The zonal averages of these computations are presented in Table 5.

Considered from one viewpoint, these data simply verify the fact that dwelling unit densities, on the whole, tend to vary inversely with distance from the city center. Thus the data show the average inner city resident has approximately one-and-one-half times as many relocation opportunities within half a mile of his residence than the middle zone households, and more than twice as many

²²S. A. Stouffer, "Intervening Opportunities: A Theory Relating Mobility and Distance," American Sociological Review, Vol. 5, 1940, pp. 845-867; and idem, "Intervening Opportunities and Competing Migrants," Journal of Regional Science, Vol. 2, 1960, pp. 1-26.

²³L. D. McCann, "Changing Morphology of Residential Areas in Transition," unpublished Ph. D. dissertation, University of Alberta, 1972, 230 pp.

TABLE 5

NUMBER OF DWELLING UNITS LOCATED WITHIN GRADUATED DISTANCE BANDS CENTERED ON CENSUS TRACT CENTROIDS, ZONAL AVERAGES, 1971

Distance Bands (Miles)	Inner Zone	Middle Zone	Outer Zone
0 - 0.5	3,482	2,324	1,605
0 - 1.0	12,546	9,238	5,683
0 - 1.5	25,465	19,866	11,180
0 - 2.0	43,113	33,371	18,114
0 - 2.5	61,773	48,963	27,073
0 - 3.0	81,541	65,962	38,809

Source: Author's calculations from data provided by L. D. McCann.
See footnote 23 of this chapter.

opportunities than outer suburban residents. However, while this general pattern may have been expected, the data nonetheless provide an empirical assessment of areal variations in household opportunity sets. Indeed, in reality, the zonal differences will be even greater than these data suggest, as obviously not all dwelling units are available at a given time. As a rule, dwelling units really only rate as opportunities when they are vacant. Therefore, the rate of migration out of units in an area becomes an important consideration and, as was indicated earlier, this tends to vary inversely with distance from the city center. The research hypothesis (H_3) is based on these points.

Hypothesis 4. The final aspect of the distance component to be examined relates to directional bias. Most studies of migration distances have failed to differentiate between inward and outward movements. Adams, however, made this distinction and

found that inward movements tended to be longer than outward shifts.²⁴ His suggested explanation of the differential was that moving inwards possibly represents a radical housing adjustment, while outward moves proceed a step at a time. For example, fitting such a pattern of inward movement would be the case of contracting suburban households seeking smaller accommodation in the inner city rental market. It can be expected, though, that this differential will vary according to peculiarities inherent to the housing market of the city being studied. For example, in cities where suburban apartment construction has flourished, households seeking rental accommodation are presented with numerous locational alternatives to moving into the inner city. What, if any, differential may be expected is, therefore, uncertain. Consequently, the research hypothesis (H_4) postulates no difference.

Empirical Results

The remainder of this section is addressed to the empirical testing of these three hypotheses of distance bias. The data base for these tests was the 10 per cent migration sample.²⁵

In order to test H_2 , that most movements will be short distance in nature, the linear distances of the 1,234 sample migrations were calculated and grouped into half-mile distance classes. The distance frequency distribution thus obtained is shown in Table 6 and Figure 3. The data indicate the distance distribution to follow a

²⁴Adams, op. cit., p. 315.

²⁵ $N = 1,234$. Moves to and from satellite centers were excluded from these analyses as it was suspected that such moves might involve somewhat different considerations from those of purely intra-city flows.

TABLE 6

MIGRATION DISTANCES, BY ORIGIN ZONES^a
(PERCENTAGE OF MOVES)

Distances (Miles)	Inner Zone N = 407	Middle Zone N = 493	Outer Zone N = 334	Totals N = 1,234
Less than 0.5	39.6	26.8	21.2	29.5
0.5 - 0.9	14.7	13.2	15.5	14.3
1.0 - 1.4	9.3	12.2	9.9	10.6
1.5 - 1.9	6.9	7.8	10.8	8.3
2.0 - 2.4	7.4	8.7	6.9	7.8
2.5 - 2.9	7.1	8.7	8.4	8.1
3.0 - 3.4	5.2	5.3	9.6	6.4
3.5 - 3.9	4.2	4.7	2.7	4.0
4.0 - 4.4	2.5	3.0	2.7	2.7
5.0 - 5.4	1.2	3.0	1.5	2.0
5.5 - 5.9	-	2.0	0.9	1.1
6.0 - 6.4	-	1.0	1.5	0.8
6.5 - 6.9	-	0.2	1.5	0.5
7.0 - 7.4	-	0.4	0.3	0.2
7.5 - 7.9	-	-	1.2	0.3
8.0 and over	-	-	0.6	0.2
Totals	100.0	100.0	100.0	100.0

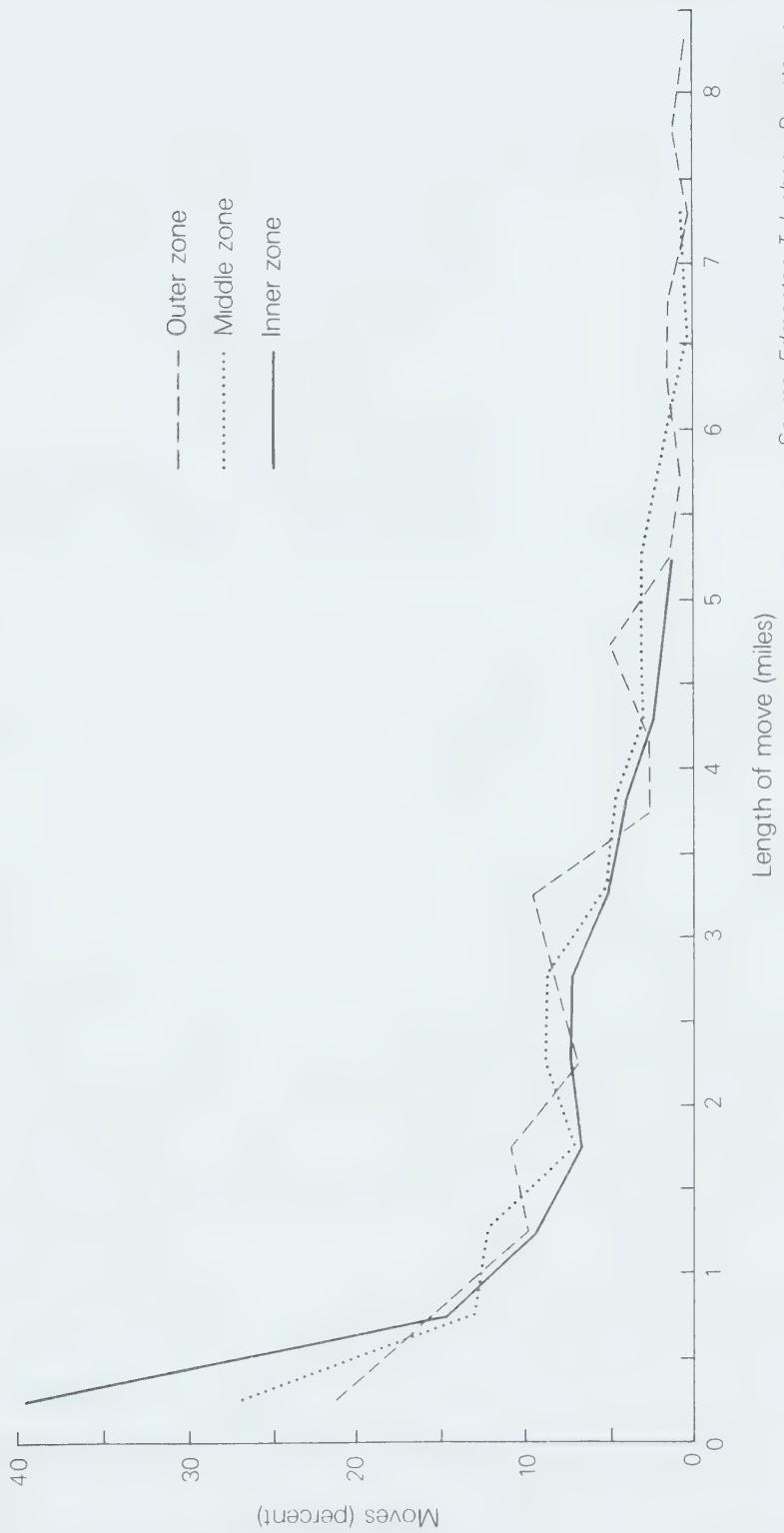
^aTen percent sample of moves; moves to and from satellite centers are not included.

Source: Edmonton Telephone Directories 1970, 1971.

marked distance-decay function of the negative exponential form, thus confirming the expected pattern.

Table 6 also reveals strong support for H₃. Using the percentage of movers shifting less than half a mile as a measure of distance bias, it is strikingly evident that inner city movers display the most biased pattern. Further in line with the hypothesis, middle zone households appear to display a slightly more biased distribution than outer suburban residents. Also, the termination of the

MIGRATION DISTANCES by ORIGIN ZONES



Source *Edmonton Telephone Directories*
1970, 1971.

Figure 3

tails of the inner and middle zone distributions reflect the limitations enforced by the city's spatial dimensions.

Simple tests for the differences between proportions were used to establish whether the observed zonal differences were statistically significant. Not surprisingly, in light of the absolute percentage differences, the percentage of inner zone movers relocating within half a mile of the previous residence was found to be statistically significant ($< .001$ level) from the middle and outer zone percentages. The difference between the percentage of middle and outer zone movers shifting less than half a mile also proved to be significant ($< .05$ level), thereby completing verification of the hypothesized pattern.

To test H_4 , each of the sample moves was examined to see whether the move had placed the household concerned at a different distance from the Peak Value Intersection (P. V. I.). One hundred and fifty-six moves were found to have caused no change in the origin - P. V. I. distance and were, therefore, excluded from further consideration. The remaining 1,078 moves were classified into two groups on the basis of whether they relocated the households closer to or further away from the P. V. I. The mean distances of the inward and outward moves were then calculated to give the data presented in Table 7.

Inspection of the tabulated data reveals no support for the hypothesized pattern. Instead, outward moves are shown to be longer, which interestingly is the converse of the tendency observed by Adams. To some degree, this differential is also suggested by Table 1, as the flow data in that table indicate that moves from the

TABLE 7

MEAN LENGTHS OF INWARD AND OUTWARD MOVES,
BY ORIGIN ZONES

Origin Zone	Inward Moves		Outward Moves		Significance Level
	No. of Moves	Mean Length	No. of Moves	Mean Length	Between Inward and Outward Means
		(Miles)		(Miles)	
Inner	78	0.7	256	1.9	.001
Middle	182	1.7	262	2.3	.001
Outer	192	2.4	108	2.2	N.S.
Totals	452	1.8	626	2.1	.01

Source: Edmonton Telephone Directories 1970, 1971.

inner city to the outer zone are considerably more numerous than moves in the opposite direction. However, this flow data was not available when the research hypothesis was initially formulated.

SECTORAL BIAS

Research Hypothesis

H_5 : that intra-urban migrations will tend to show a sectoral bias based on the residence - C. B. D. axis.

Hypothesis 5. In addition to a distance effect, it has also been postulated that intra-urban residential moves will tend to display a sectoral bias. Early suggestion of such a pattern can be traced back to Hoyt's sectoral theory of urban structure and growth.²⁶

²⁶H. Hoyt, The Structure and Growth of Residential Neighbourhoods in American Cities, Washington, United States Government Printing Office, 1939, 189 pp.

More recently, various factorial investigations have found that the socio-economic characteristics of households tend to vary by sectors.²⁷ Numerous studies have also revealed that the majority of intra-urban moves are within neighbourhoods of similar socio-economic characteristics, thereby suggesting, given the findings of the factorial studies, a sectoral pattern of movement.²⁸

The strongest support for a sectorally biased system of migration fields, however, has come from the behavioral approach to migration research, in particular from the paper of Adams mentioned in the discussion of distance biases.²⁹ Adams argued that an urban resident builds up and retains a mental map (image) of his city. This map was seen as being largely a function of the resident's kinetic field. Then, assuming frequent visits to the Central Business District (e.g., journey to work, shopping, etc.), it was proposed that repetitive movements along the residence - C. B.D. axis would produce a sharply focussed mental map resembling a pie-shaped wedge.³⁰ In turn, the images of other parts (sectors) of the city might either be

²⁷ For example see R. A. Murdie, Factorial Ecology of Metropolitan Toronto, 1951-1961, Research Paper No. 116, Department of Geography, University of Chicago, 1969, 212 pp.; and P. H. Rees, "Concepts of Social Space," in B. J. L. Berry and F. E. Horton (eds.), Geographical Perspectives on Urban Systems, Englewood Cliffs, Prentice Hall, 1970, pp. 306-394.

²⁸ See J. W. Simmons, "Changing Residence in the City: A Review of Intra-Urban Mobility," Geographical Review, Vol. 58, 1968, pp. 622-651.

²⁹ Adams, op. cit.

³⁰ The increasing tendency of city residents to patronize suburban shopping centers and other facilities was suggested as serving to extend the sectoral image right out to the urban periphery. Ibid., p. 304.

blurry or non-existent. Having set up this conceptual model, it was argued that:

When people make consumption choices involving locational considerations, their mental maps are used as a frame of spatial reference to help assign preferences . . . When a change of residence is contemplated, the search for a new home will be confined by the mental maps.³¹

By the terms of this model, intra-urban migrations should therefore show a pronounced sectoral bias. Adams tested his propositions with migration data from Minneapolis and obtained results which he felt were consistent with his theoretical constructs.

As Adams points out, the notion of sectoral bias is of considerable pragmatic importance. If housing demand is, on the whole, sector specific, important policy implications regarding housing supply arise for urban planners and residential developers. Consequently, it is somewhat surprising that few other investigations have been undertaken to test this notion. The few that have, have all found some signs of sectorality, but more studies are needed before concrete generalizations can be made.

At the same time, it is suggested that while the notion of mental maps influencing migration behavior may have considerable explanatory value, Adams' model is excessively restrictive. In the first place, for many urban residents not employed in the C.B.D., a residence-workplace kinetic field will be of at least equal image-building importance as a residence - C.B.D. axis. Secondly, the concept of a single, sharply focussed mental sector ignores the likelihood

³¹Ibid., p. 307. The relationship of search space to awareness space is examined in Chapter VIII.

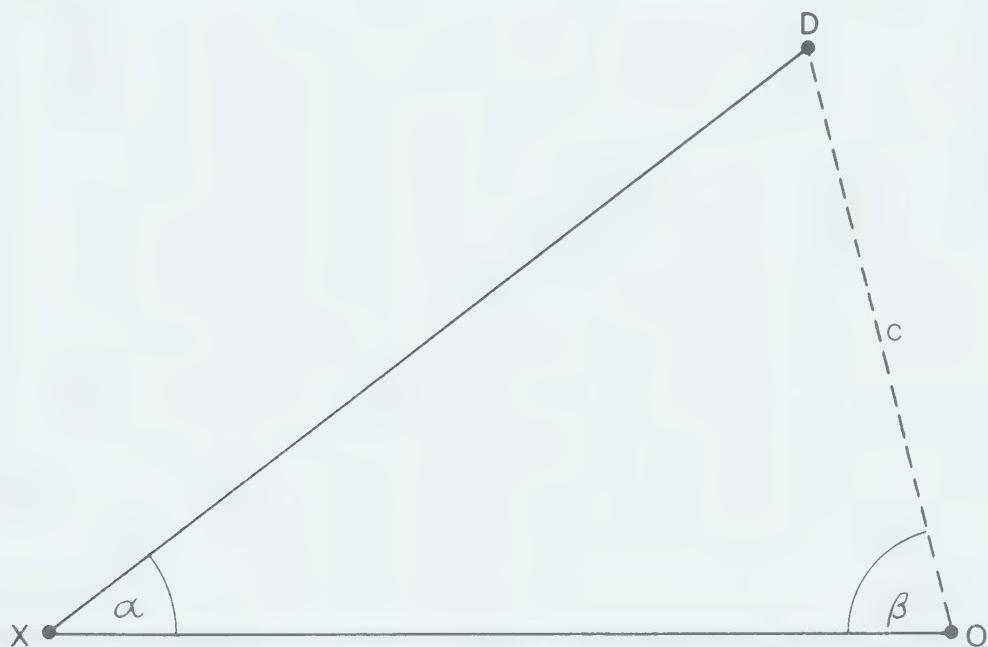
that members of most urban households will have lived in more than one sector of a city. Also, the cumulative experience of such non-employment spatial activities as recreation, social visiting, and holiday travel will likely give most households a reasonable knowledge of more than one sector of a city. To use a local example, a survey of Edmonton households would almost certainly reveal most respondents to have made several automobile trips to Jasper and Calgary. It therefore seems intuitively logical to expect that a north-east Edmonton household which has made these trips will have some knowledge of the western and southern parts of the city, and that this information will be utilized in any future residential shifts.

The purpose of these comments is not to dismiss Adams' basic thesis, but simply to point out that a pure residence-C. B. D. sectoral bias is unlikely to occur due to the operation of various uncontrolled-for intervening variables. All the same, as the residence - C. B. D. axis is of some relevance to almost all urban households, it may be supposed that, in the aggregate, that sector will have most predictive power as regards residential site selection. The research hypothesis is tested with the above comments in mind.

Empirical Results

Several approaches are available for assessing the existence of sectoral bias. Adams' tests were based on two sets of angles: first, the angle made by straight lines connecting the origin and destination to the downtown center, angle OXD; second, the angle of the move with respect to the downtown center, angle XOD (Figure 4). Another method is to transform the move data into a distribution

SPATIAL ATTRIBUTES OF INTRA-URBAN MOVES



O = Origin node

D = Destination (Relocation) node

X = Peak value intersection (Orientation node)

α = Sector angle ($\angle OXD$)

β = Move angle ($\angle XOD$)

C = Length of move

Figure 4

TABLE 8

MIGRATION SECTOR ANGLES, BY ORIGIN ZONES^a
(PERCENTAGE OF MOVES)

Sector Angles (Degrees)	Inner Zone N = 407	Middle Zone N = 493	Outer Zone N = 334	Totals N = 1,234
Less than 10	33.2	33.9	34.4	33.8
10 - 19	12.5	14.2	17.9	14.7
20 - 29	9.4	9.2	8.7	9.1
30 - 39	5.7	5.1	6.0	5.5
40 - 49	6.9	6.3	4.5	6.0
50 - 59	3.4	3.7	6.6	4.4
60 - 69	2.7	4.5	1.2	3.0
70 - 79	2.7	2.6	4.2	3.1
80 - 89	2.9	2.8	1.8	2.6
90 - 99	1.2	2.2	2.4	1.9
100 - 109	2.5	1.4	1.2	1.7
110 - 119	1.2	2.6	0.9	1.7
120 - 129	2.5	3.3	1.5	2.5
130 - 139	2.9	2.2	2.4	2.5
140 - 149	2.2	2.0	2.4	2.2
150 - 159	2.5	1.2	1.5	1.7
160 - 169	3.4	1.4	1.2	2.0
170 and over	2.2	1.4	1.2	1.6
Totals	100.0	100.0	100.0	100.0

^aTen percent sample of moves; moves to and from satellite centers are not included.

Source: Edmonton Telephone Directories 1970, 1971.

that retains the spatial attributes of the original moves and to apply techniques of standard ellipse analysis to the transformed distribution.³² The OXD angle was used in the present study as it is readily

³²See Brown and Holmes, op. cit.

MIGRATION SECTOR ANGLES by ORIGIN ZONES

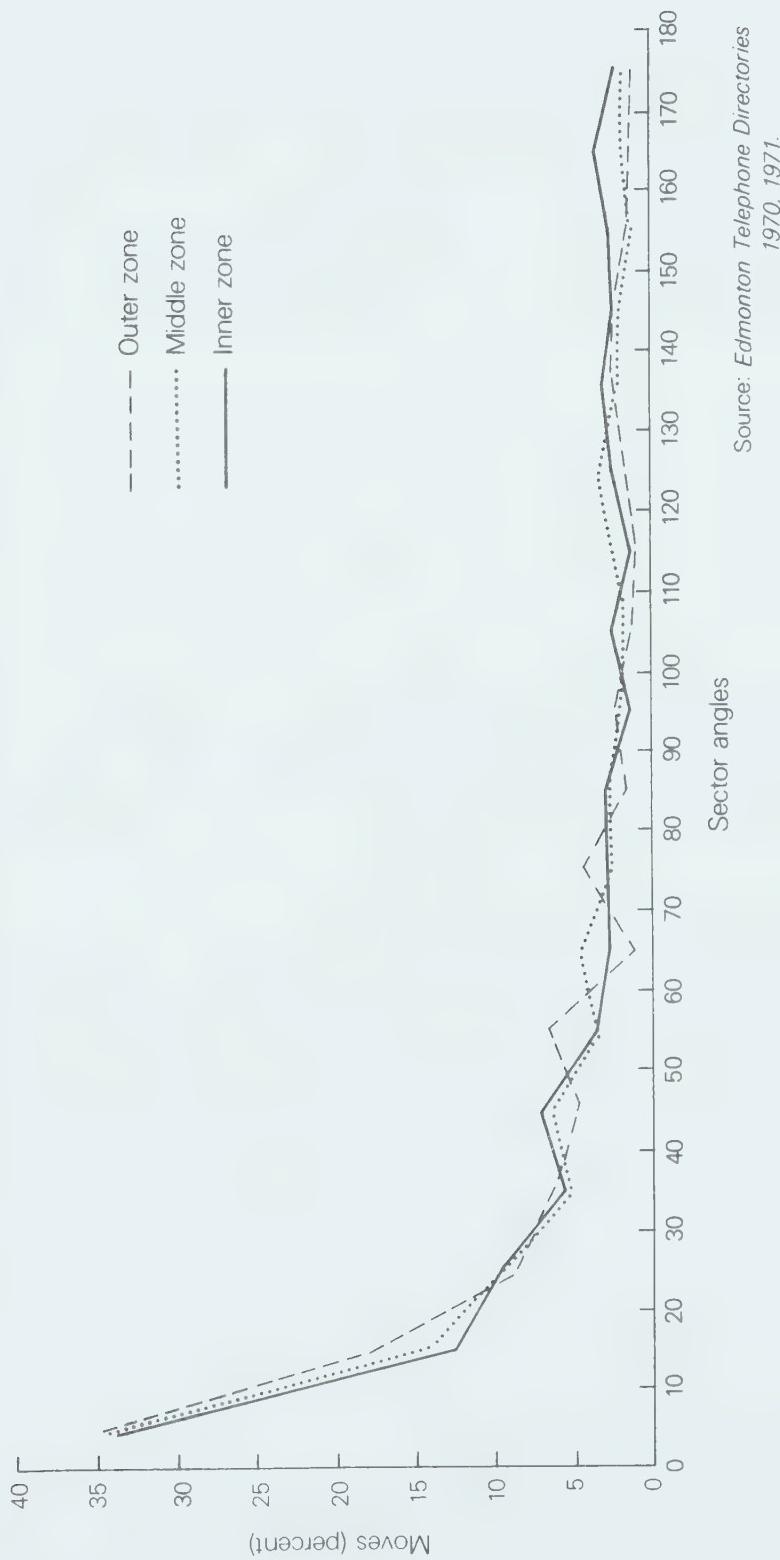


Figure 5

calculated and provides a reasonable index of sectoral bias.³³

The sector angles (ΔOXD) of the 1,234 sample moves which originated and terminated within the city were calculated and grouped into ten degree classes (Table 8 and Figure 5). The resulting distribution indicates a definite sectoral dimension to the sampled migration fields. Fully one-third of all the moves created angles of less than ten degrees and almost 60 per cent fell within the 0° - 29° class.³⁴

Having confirmed the research hypothesis of a strong sectoral component, tests were then conducted to see whether the strength of the bias varied significantly amongst the three zonal

³³Minor shortcomings exist in all of the commonly used measures of spatial bias. A weakness of the OXD angle is that the angles of moves of given length and direction vary according to the location of the origins relative to the P. V. I. However, this is not a particularly serious problem in the case of a city of Edmonton's limited spatial extent. Also see footnote 34 of this chapter.

³⁴A large measure of this sectoral bias derives directly from the distribution of migration distances, as short moves automatically produce small sector angles. In the case of a sector of ten degrees, households located one mile from the P. V. I. have to move approximately one-sixth of a mile laterally to cross the sector boundary; for households located two and three miles from the P. V. I., lateral moves of approximately one-third and one-half of a mile, respectively, are needed to cross the boundary. All moves of less than these distances will automatically fall within a ten degree sector. Furthermore, a proportion of the moves greater than these distances will also fall within such a sector if moves are purely random in direction. To test the extent to which the observed sectoral bias derived from these geometrical considerations the following procedure was utilized. Firstly, all moves originating one, two and three miles from the P. V. I. were extracted from the sample data. Then, assuming lateral movement, the lengths of the moves were examined to see what proportion of the moves would automatically fall within a ten degree sector. The remaining move lengths were then randomly distributed in terms of direction. Between 70 and 75 per cent of the observed sector angles of less than ten degrees were found to be explained in this manner. This aspect of spatial bias is being investigated more fully in another study: O. Lukomskyj, "Birth, Death and Intra-Urban Migration," M. A. thesis (in preparation), University of Alberta.

sub-groups. However, the only significant difference found was between the outer and inner groups.³⁵ The apparent weaker bias of the inner zone movers accords with the earlier footnoted shortcoming of the OXD angle as a measure of sectorality. It may also reflect Horton and Reynolds' Cedar Rapids finding that, while sector type mental maps characterize suburban residents, inner city dwellers tend to possess somewhat more compact images.³⁶

DIRECTIONAL BIAS

Research Hypotheses

H_6 : that the overall pattern of movement will be outward.

H_7 : that the move angles ($\angle XOD$) of a representative sample of intra-urban movements will approximate a uniform distribution.

Hypothesis 6. The directional dimension of intra-urban migration, like the distance factor, has received considerable attention from Urban researchers. Numerous studies were conducted during the inter-war and immediate post-war years as a result of the then growing awareness of the so-called "suburban trend." Representative of the studies of this era were those of Caplow,³⁷

³⁵The proportion of outer origin zone moves making sector angles of less than thirty degrees was significantly greater (.05 level) than the inner group proportion.

³⁶F. E. Horton and D. R. Reynolds, "Action Space Differentials in Cities," in H. McConnell and D. Yaseen (eds.), Perspectives in Geography: Models of Spatial Variation, Dekalb, Northern Illinois University Press, 1971, pp. 84-102.

³⁷T. Caplow, "Incidence and Direction of Residential Mobility in a Minneapolis Sample," Social Forces, Vol. 27, 1949, pp. 413-417.

Dewey,³⁸ Douglass,³⁹ Lind,⁴⁰ and Young.⁴¹ Recent years have seen a resurgence of research interest in this topic. The present concern for the topic largely derives from the previously mentioned paper by Adams in which the directional and distance components of intra-urban migration were subjected to renewed scrutiny.⁴² Although some similarities may be drawn between the two groups of research, the approach initiated by Adams differs conceptually from the earlier studies in that it is predicated upon behavioral processes thought to underly household movements in intra-urban space.

One of the most widespread notions regarding intra-urban mobility is that most shifts are outward in orientation. The idea of a general process of outward movement is implicit in both Burgess's and Hoyt's "classic" theoretical formulations of city structure and these, no doubt, have done much to spread the idea of a single outward redistribution of population. Similarly, the family cycle model, as previously mentioned, incorporates the notion of a stepwise outward progression by households. Lending most credence to the notion, however, is the fact that a net outward redistribution of

³⁸Dewey, op. cit., pp. 118-125.

³⁹H. P. Douglass, The Suburban Trend, New York, Century Co., 1925, 340 pp.

⁴⁰A. W. Lind, A Study of Mobility of Population in Seattle, Seattle, University of Washington Publications in the Social Sciences, 1925, 70 pp.

⁴¹K. Young, J. L. Gillan, and C. L. Dedrick, The Madison Community, Madison, University of Wisconsin Studies in the Social Sciences and History, No. 21, 1934, 229 pp.

⁴²Adams, op. cit. Also see the studies cited in footnote 27, p. 11 of this study.

population has been a virtually invariant finding of empirical investigations conducted across a broad spectrum of urban settings.⁴³ Unfortunately, the consistency with which this pattern has been observed has tended to give rise to an overly-simplified impression of the directional pattern of intra-urban movements. More specifically, the finding of net outward movement is often injudiciously taken to mean an almost complete predominance of such moves within the total intra-urban migration system.

The likelihood of such a single pattern occurring is slim, as a variety of household circumstances favor inward movements of one form or another. One example is the tendency of some post-child households to move to smaller, inner city, rental accommodation.⁴⁴ Another case in which inward movements may occur is that of new arrivals to a city who rent accommodation in the suburbs while looking around the city for a house to purchase.

In view of this situation, one of the objectives of the present section is to delineate the position of outward migrations relative to other directional flows, hence the research hypothesis (H_6).⁴⁵

⁴³One exception is Brown and Holmes, op. cit. Evidence of slight inward bias was found.

⁴⁴See R. J. Johnston, "Population Movements and Metropolitan Expansion: London 1960-61," Transactions of the Institute of British Geographers, Vol. 46, 1969, p. 71.

⁴⁵With regard to this problem, the importance of obtaining a really representative sample of movers should be noted. If a migration sample is heavily biased towards households originating in the inner city, it can be expected, on purely geometrical grounds, that a heavy outward orientation will be observed. Conversely, a sample biased towards outer origins will show an inward orientation.

Hypothesis 7. This objective is closely related to the other concern of this section, which is to examine certain aspects of Adams' argument for directional bias in intra-urban migration. As was noted in the discussion of sectorality, Adams' basic contention was that urban residents possess wedge-shaped mental maps of their city and that intra-urban movements are controlled by these images. Following from this proposition, Adams suggested that the average mover seeking different housing would be expected to move inward or outward because housing in the origin ring is very similar to that which he already occupies. Measuring move directionality in terms of the move angle made with respect to the downtown center, angle XOD, Adams therefore postulated that the distribution of move angles within a given city would approximate a bimodal distribution with angles clustering near 180 degrees (outward moves) and zero degrees (inward moves).⁴⁶ Few moves were expected to fall around 90 degrees (lateral moves) as this would indicate that migrants chose housing of about the same kind and age as their former residence.

Although Adams concluded that his empirical data checked with the hypothesized pattern, a number of questions surround his argument. Given the existence of sectoral bias in intra-urban migration, his theory revolves around the assumption that housing in a particular ring will be very similar, thus forcing a household looking

⁴⁶A weakness of this index of directionality is that small angles can be produced by cross-city outward moves. However, as Adams notes, such moves are atypical. Strictly speaking, though, "inward moves" are not completely synonymous with "angles clustering near zero degrees."

for different housing to move to another ring.⁴⁷ Adams based this notion upon research he has conducted on the residential structure of mid-western cities, but unfortunately he included no supportive data from that research.

The reader thus has little choice other than to accept Adams' contention of concentric structural homogeneity for mid-western cities. However, other researchers, before testing for a bimodal distribution of move angles, should check to see whether a similar high degree of homogeneity applies in their particular study area. This was done for Edmonton using census tract data from the 1961 census.⁴⁸ The dimension of residential structure considered was "the number of bedrooms per dwelling unit", in recognition of the fact that many residential movements are stimulated by expanding or diminishing dwelling space requirements.⁴⁹ The census tabulations are reproduced in Table 9. These data show that while a certain degree of homogeneity exists, only in a relatively few cases would use of Adams' term "very similar" be justified to describe this component of Edmonton's residential structure. Classifying dwelling units of two bedrooms or less as "small," and those with three or more as "large," it is apparent that the majority of census tracts offer a substantial number of housing opportunities of both types. If the tracts are aggregated to form concentric rings, the availability of both types

⁴⁷ Elsewhere in the paper Adams talks in terms of families desiring a radically different kind of housing, but it is doubtful whether the majority of intra-urban movements fit this description.

⁴⁸ No suitable data were available from the 1966 Census.

⁴⁹ See Rossi, op. cit.

TABLE 9

NUMBER OF BEDROOMS PER DWELLING UNIT, EDMONTON, 1961

Census Tract	No. Bedrooms	1 Bedroom	2 Bedrooms	3 Bedrooms	4 Bedrooms	5 Bedrooms	Total Units
1	10	129	401	1,055	91	22	1,708
2	9	140	876	961	94	47	2,127
3	0	142	531	857	238	20	1,788
4	0	51	363	313	90	5	822
5	15	230	795	391	132	30	1,593
6	5	202	962	510	148	65	1,892
7	41	365	842	803	91	38	2,180
8	15	296	551	381	128	36	1,407
9	25	234	633	486	132	70	1,580
10	41	462	733	477	121	65	1,899
11	15	350	648	488	112	30	1,643
12	0	180	583	424	181	15	1,383
13	15	138	437	416	206	51	1,263
14	156	1,025	753	509	183	36	2,662
15	358	488	243	113	71	81	1,354
16	5	221	587	383	206	25	1,427
17	5	71	626	897	435	112	2,146
18	99	645	596	437	271	73	2,121
19	745	1,914	770	263	125	103	3,920
20	699	666	590	373	147	124	2,599
21	0	15	187	661	329	85	1,277
22	24	123	257	375	320	211	1,310
23	128	203	321	179	101	57	989
24	91	574	689	426	176	116	2,072
25	30	304	940	832	213	54	2,373
26	5	339	1,052	1,093	298	44	2,831
27	36	275	705	654	165	40	1,875
28	0	93	157	401	323	70	1,044
29	15	190	599	797	390	60	2,051
30	34	218	458	340	171	54	1,275
31	15	267	598	497	204	66	1,647
32	5	120	637	503	136	20	1,421
33	0	124	442	704	278	111	1,659
34	0	138	434	682	132	50	1,436
35	20	228	543	2,145	207	40	3,183
36	0	44	172	561	110	20	907
37	5	331	527	451	172	40	1,526
38	15	93	385	668	212	20	1,393
39	220	703	669	251	132	44	2,019
40	0	0	70	861	275	47	1,253
41	0	11	46	1,274	242	25	1,598
42	0	9	86	1,119	98	5	1,317
43	0	41	129	683	65	10	928
44	0	10	184	815	180	10	1,199
45	10	40	78	34	10	0	172
Totals	2,911	12,442	22,885	27,543	8,141	2,347	76,269

Source: Dominion Bureau of Statistics, Population and Housing Characteristics by Census Tracts, Edmonton, 1961, (Ottawa, 1963).

EDMONTON CENSUS TRACTS, 1961

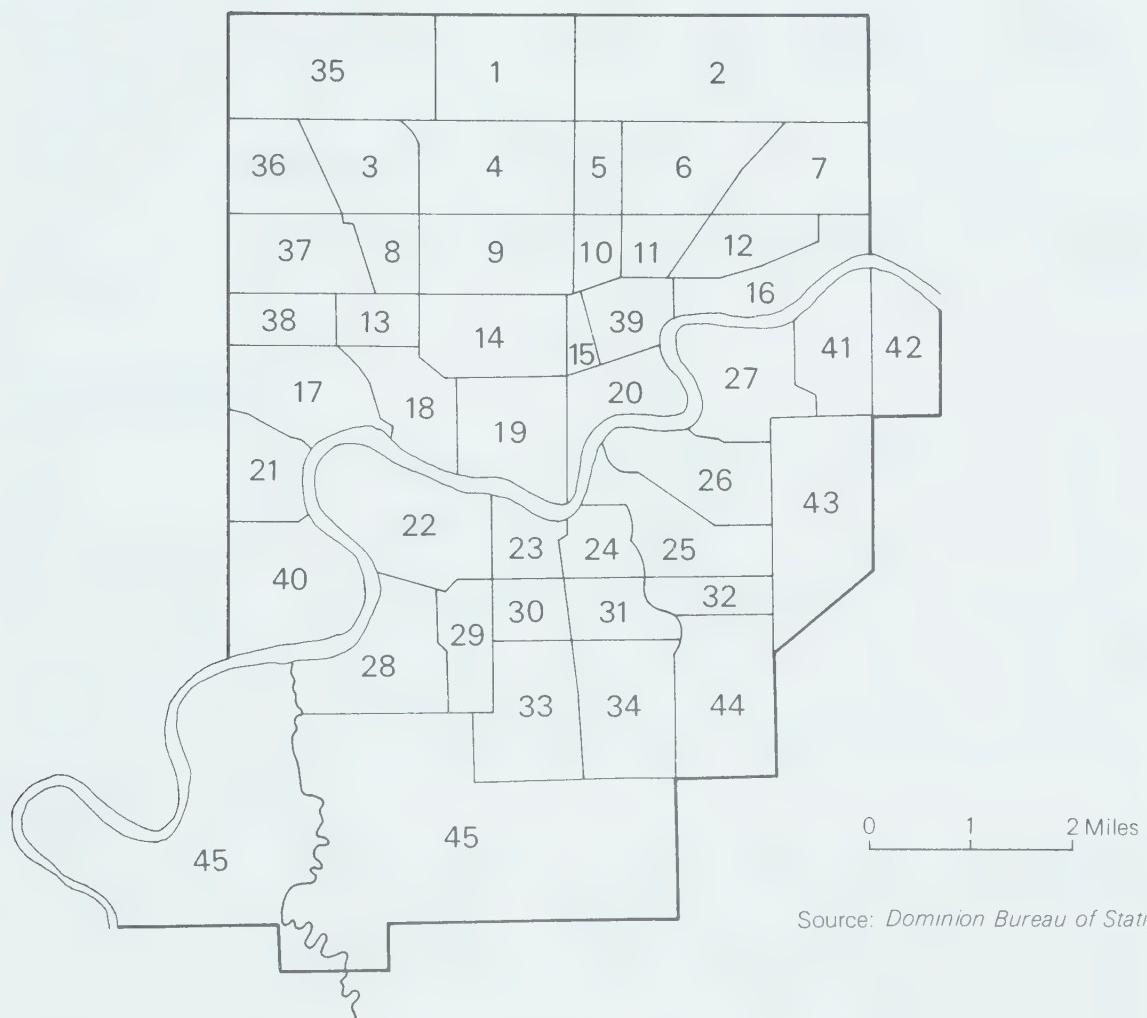


Figure 6

of units is even more evident. The point being made, therefore, is that in some respects different housing can be obtained by moving laterally.

A further issue is that while Adams notes that most intra-urban moves are short distance in nature, he tends to ignore the implications of this fact for his theoretical propositions; that is, short distance lateral moves, as well as inward and outward shifts, can take place within the confines of a single sector. Therefore, grafting the likelihood of lateral moves upon Adams' hypothesis of a bimodal distribution of move angles, the research hypothesis (H_7) is arrived at.

Empirical Results

The 10 per cent sample data were also used to test these hypotheses. For H_6 the linear distances of the origin and destination points of each move from the Peak Value Intersection (P. V. I.) were calculated and compared. The differences between the two sets of distances were then classified by distance bands to give the data presented in Table 10.

A number of points relevant to the research hypothesis can be drawn from these data. Firstly, the postulated pattern of general outward movement is verified in the simple sense that outward moves are more numerous than inward shifts. While this is significant, of at least equal significance are the related patterns of inward movement and net population redistribution. The finding that approximately 35 per cent of the sample moves relocated households closer to the P. V. I. should dispel any notions of a simple outward pattern of

TABLE 10

DISTANCES OF DESTINATION NODES FROM PEAK VALUE
 INTERSECTION RELATIVE TO ORIGIN NODE DISTANCES
 FROM PEAK VALUE INTERSECTION, BY ORIGIN ZONES^a
 (PERCENTAGE OF DESTINATION NODES)

Distances (Miles)	Inner Zone N = 407	Middle Zone N = 493	Outer Zone N = 334	Totals N = 1,234
Closer to C. B. D. than Origin Nodes				
Less than 0.5	17.2	17.1	18.5	17.5
0.5 - 0.9	2.0	9.9	12.3	7.9
1.0 - 1.4	-	4.5	5.7	3.3
1.5 - 1.9	-	3.5	8.4	3.7
2.0 - 2.4	-	1.0	4.5	1.6
2.5 - 2.9	-	1.0	4.2	1.5
3.0 and over	-	-	3.9	1.1
Further from C. B. D. than Origin Nodes				
Less than 0.5	24.3	18.9	15.5	19.8
0.5 - 0.9	11.3	9.1	7.5	9.4
1.0 - 1.4	7.4	7.3	5.4	6.8
1.5 - 1.9	5.7	7.5	3.6	5.8
2.0 - 2.4	5.4	5.1	0.3	3.9
2.5 - 2.9	3.9	2.8	-	2.4
3.0 and over	4.9	2.4	-	2.6
Same Distance from C. B. D. as Origin Nodes	17.9	9.9	10.2	12.7
Totals	100.0	100.0	100.0	100.0

^aTen percent sample of moves; moves to and from satellite centers are not included.

Source: Edmonton Telephone Directories 1970, 1971.

movement. Also evident is the fact that comparatively few households undertake moves which drastically change their location in intra-urban space relative to the city center. Indeed, fully two-thirds of the mover sample relocated within a range of plus or minus one

mile of their origin distance from the city center.

In order to test H_7 , all moves of less than one-quarter of a mile were excluded from consideration. This was done so as to maintain comparability with Adams' study in which moves within the same city block were deleted. The move angles of the remaining migrations were calculated and tabulated into the frequency distributions presented in Table 11 and Figure 7. The data thus derived offer no support for the hypothesized distribution. Figure 7 suggests the distribution of move angles for the total sample to have a measure of positive skewness almost certainly sufficient to disprove any notions of uniformity or, for that matter, bimodality of the type postulated by Adams. A chi-square goodness-of-fit test between the total observed distribution and the hypothesized uniform distribution confirmed the absence of uniformity ($\chi^2 133.208$, 17 d.f., $P < .001$). The clustering around 0° - 29° undoubtedly stems from the addition of a number of cross-city outward moves to the sizeable set of small-angled inward moves. Although the data fail to substantiate the research hypothesis, a point of interest is that lateral moves, in line with the earlier discussion, are quite common.

The individual zonal contributions to this distribution can be gauged from Table 11 and Figure 7. In line with the earlier discussion of the city's spatial geometry, moves originating in the outer suburbs were found to exhibit a pronounced inwards bias ($\chi^2 118.885$, 17 d.f., $P < .001$). Somewhat surprisingly, middle origin zone moves were also discovered to constitute a positively skewed distribution differing significantly from uniformity ($\chi^2 37.709$, 17 d.f., $P < .005$). Reference back to Table 8 shows that this

TABLE 11

MIGRATION MOVE ANGLES, BY ORIGIN ZONES^a
(PERCENTAGE OF MOVES)

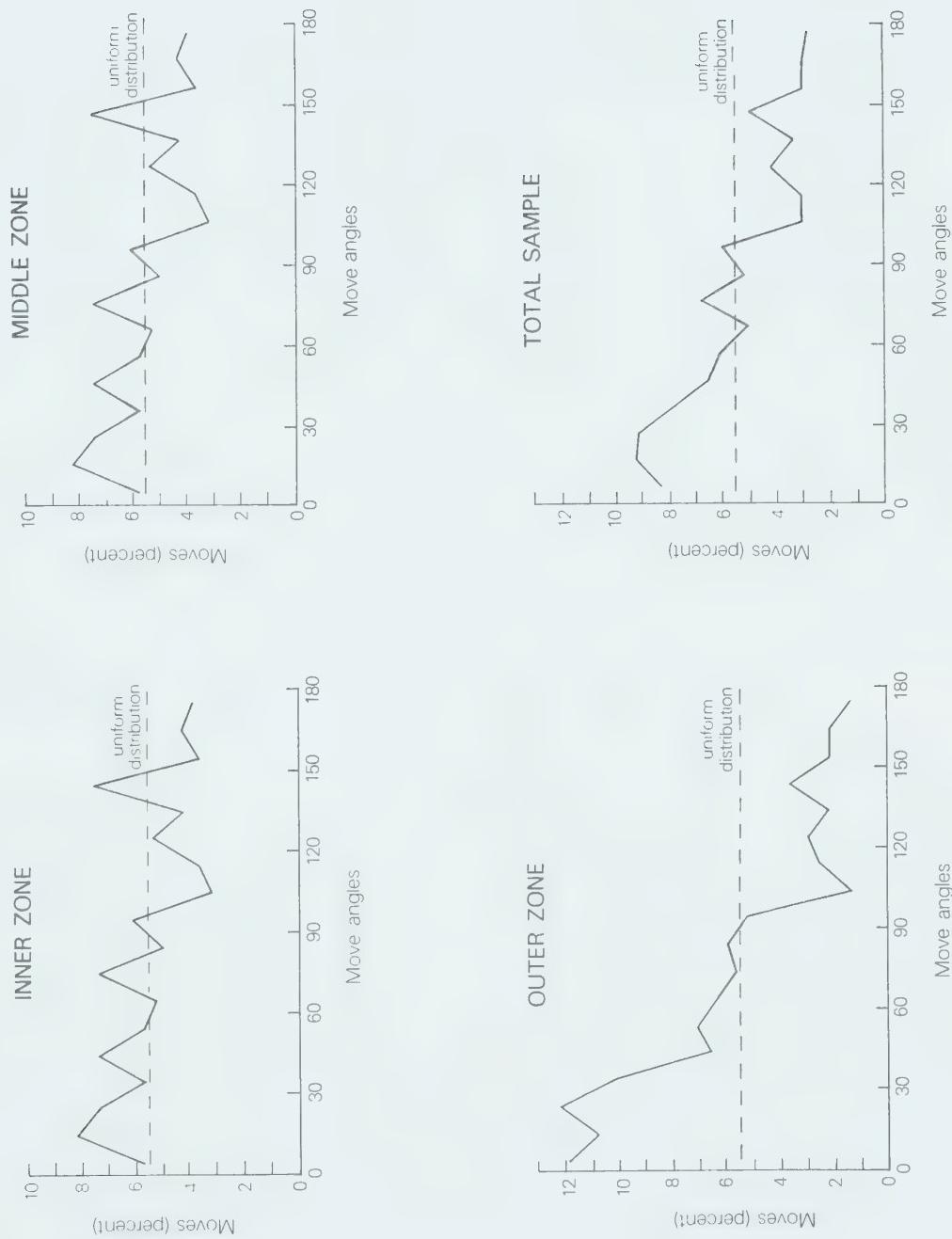
Move Angles (Degrees)	Inner Zone N = 280	Middle Zone N = 412	Outer Zone N = 285	Totals N = 977
Less than 10	5.7	7.7	11.9	8.4
10 - 19	8.2	8.7	10.9	9.2
20 - 29	7.5	8.0	12.3	9.1
30 - 39	5.7	7.5	10.2	7.8
40 - 49	7.5	6.3	6.7	6.7
50 - 59	5.7	6.1	7.0	6.2
60 - 69	5.4	4.1	6.3	5.1
70 - 79	7.5	7.0	5.6	6.8
80 - 89	5.0	5.3	6.0	5.4
90 - 99	6.0	6.6	5.3	6.0
100 - 109	3.2	4.4	1.4	3.2
110 - 119	3.6	3.7	2.4	3.3
120 - 129	5.4	4.9	2.8	4.4
130 - 139	4.3	4.1	2.1	3.6
140 - 149	7.5	4.6	3.5	5.1
150 - 159	3.6	3.9	2.1	3.3
160 - 169	4.3	3.4	2.1	3.3
170 and over	3.9	3.7	1.4	3.1
 Totals	100.0	100.0	100.0	100.0

^aTen percent sample of moves; moves to and from satellite centers and moves less than one quarter of a mile in length are excluded.

Source: Edmonton Telephone Directories 1970, 1971.

particular statistic, to some degree, reflects cross-city moves. More importantly, though, it indicates the quite considerable volume of short inward moves. In contrast to these patterns, inner origin zone moves showed no significant bias from uniformity (χ^2 21.316, 17 d.f., $P > .20$).

MIGRATION MOVE ANGLES by ORIGIN ZONES



Source: Edmonton Telephone Directories 1970, 1971

Figure 7

SUMMARY

This chapter has examined a number of hypotheses relating to intra-urban migration rates and spatial biases. Mobility rates within Edmonton were found to decline with increasing distance from the city center. The high rate of mobility in the inner city was expected, given the findings of previous research. However, the observed levels of turnover in the middle and outer suburbs are of considerable interest as they run contrary to the zonal patterns postulated by several researchers. Previous research has also suggested that intra-urban migrations display marked distance, sectoral, and directional biases. The Edmonton data generally confirm this suggestion. Household movements were generally short distance in nature, largely confined within the origin sector, and overall are outward in orientation. Added perspective was given to these analyses by stratifying the mover population according to origin location.

The findings also emphasize the need for further studies on these dimensions of residential mobility. For example, the Edmonton data indicate that while the net pattern of movement is outward in orientation, the migration system is best understood as a complex arrangement of inward, lateral, and outward movements. The popular notion of simple outward movement thus needs revision. Similarly, while the finding of a distinct sectoral bias to household movements supports the notion of wedge-shaped mental images, this support is only inferential. Further development of the notion will require detailed investigations of the spatial structure of images and search spaces. Some aspects of this general question will be examined in Chapter VIII.

Chapter IV

FACTORS ASSOCIATED WITH THE DECISION TO MOVE

As noted in the introduction to this study, the decision to move can be conveniently summarized by the concept of "place utility." This is defined as an individual's personal evaluation of the attractiveness or unattractiveness of a location relative to other locations. Thus, if a household experiences sufficient disutility from residing at a particular location, it is likely to consider moving. In other words, place disutility can be thought of as a state of residential disequilibrium (or stress) in the sense that a household's existing residential set seriously fails to meet the household's needs and aspirations.

Obviously the residential dimensions along which disutility and the resultant decision to move can develop are multitudinous. However, a number of researchers have suggested that, in the aggregate, the multiplicity of circumstances can be collapsed down to several key factors. Simmons, for example, has written that three major clusters of social variables need to be examined for their contributions to mobility: urbanization (demographic characteristics and life style), economic status (income, occupation, and education), and segregation (ethnic or racial origin and religion).¹ In addition to

¹J. W. Simmons, "Changing Residence in the City: A Review of Intra-Urban Mobility," Geographical Review, Vol. 58, 1968, p. 629. For relatively similar statements see G. Sabagh, M. D. Van Arsdol, Jr., and E. W. Butler, "Some Determinants of Intra-Metropolitan Residential Mobility: Conceptual Considerations," Social Forces, Vol. 48, 1969, pp. 88-98; R. J. Johnston, Urban Residential Patterns, London, Bell, 1971, 383 pp.; and D. Timms, The Urban Mosaic, Cambridge, Cambridge University Press, 1971, 277 pp.

these social factors, he noted a need to take cognizance of the role of personal problems in adjusting to the environment.

The urbanization (life cycle) factor operates in terms of households' changing space requirements, and is seen by many researchers to be the principal inducement to residential mobility. The first major statement to this effect was made by Rossi at the conclusion of his detailed study of migration within Philadelphia.

. . . the major function of mobility (is) the process by which families adjust their housing to the housing needs that are generated by the shifts in family composition that accompany life cycle changes.²

Rossi's contention has since been verified by several other studies.³

Besides acting as a mechanism for adjusting housing to housing needs, mobility is seen as a means of maintaining or improving social standing within the city. Rossi also noted this function of mobility.

Residential mobility is often the spatial expression of vertical social mobility. As families rise in social class position, they often change their residence to accord with their class destination.⁴

Whether moves are undertaken to become spatially associated with a higher stratum of society or simply to be with people of similar status

²P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, p. 9.

³For example see J. Abu-Lughod and M. M. Foley, "Consumer Strategies," in N. N. Foote et al, Housing Choices and Housing Constraints, New York, McGraw Hill, 1960, pp. 71-274; and W. A. V. Clark, "Measurement and Explanation in Intra-Urban Residential Mobility," Tijdschrift Voor Econ. En. Soc. Geografie, Vol. 61, 1970, pp. 49-57.

⁴Rossi, op. cit., p. 184.

remains uncertain.⁵ However, the general concensus is that movements undertaken for reasons of social status are markedly secondary to life cycle induced shifts. Simmons has made this point in a recent attempt to draw the literature together into a general statement on reasons for moving.

. . . within a moderately growing city more than fifty per cent of the intra-urban mobility results from the changing housing needs generated by the life cycle . . . about thirty per cent of intra-urban moves are involuntary, with ten per cent following the creation of new households and twenty per cent resulting from demolition, destruction by fire, or eviction. Perhaps another ten per cent reflect changes outside the life cycle, such as social mobility, ethnic assimilation, and neighbourhood invasion. The most meaningful adjustments are the size and facilities of the dwelling unit, followed by the social environment of the neighbourhood. The physical site and access to other parts of the city are relatively insignificant. All studies reject job location as an important reason for moving.⁶

Simmons' statement, however, should be tempered with Boyce's recent observation that:

The reasons why people move from one city to another has been fairly well examined - employment opportunity seems to be the key - but intra-city residential change has been given only slight attention.⁷

The Edmonton survey data were examined in the context

⁵For example see W. Bell, "The City, The Suburb, and a Theory of Social Choice," in S. Greer et al, (eds.), The New Urbanization, New York, St. Martin's Press, 1968, pp. 132-168; G. R. Leslie and A. H. Richardson, "Life-Cycle, Career Pattern, and the Decision to Move," American Sociological Review, Vol. 25, 1961, pp. 894-902; and P. Charde, "Where Do You Want to Live and Why: A Study of Residential Area Preference," Department of Sociology, San Fernando Valley State College, n.d., 39 pp. (Mimeoographed).

⁶Simmons, op. cit., pp. 636-637.

⁷R. R. Boyce, "Residential Mobility and Its Implications for Urban Spatial Change," Proceedings of the Association of American Geographers, Vol. 1, 1969, p. 23.

of Simmons' and Boyce's comments. To determine household motivations for moving, respondents were posed with an open-ended question simply asking them why they left their last dwelling, and a closed question asking them to state the importance of various factors in stimulating their move.⁸ The following comments chiefly derive from the responses to the open-ended question on the assumption that they will most truly represent the households' principal motivations.⁹

VOLUNTARY VERSUS INVOLUNTARY MOVES

Although it is widely accorded that the majority of intra-urban movements in North American cities are of a voluntary nature, a full understanding of residential mobility requires some knowledge of the extent of forced changes. As noted above, Simmons suggests that perhaps as many as 30 per cent of all intra-urban moves are involuntary. Excluding new household creations, this leaves the suggestion that about one in every five shifts is impelled by demolition, destruction by fire, eviction, or some similar circumstance. In the case of Edmonton, this level would translate to approximately 2,800 forced household shifts per annum.¹⁰

The survey data, however, indicate that involuntary

⁸The responses to the open-ended question are presented in Table 12. The general categories of reasons described in the table mirror the individual responses as closely as possible, and for that reason are not completely mutually exclusive.

⁹A comparison of the responses to the open and closed questions revealed no significant differences between the two sets of data.

¹⁰This calculation is based on the volume of movement indicated in Table 1.

movements are relatively insignificant in terms of the total migration fabric. Only 25 of the 342 surveyed households could be considered to have been forced to move from their previous dwelling. Thus, in the case of Edmonton at least, residential change, to echo Boyce's comment, "appears to be highly voluntary (i.e., strictly speaking, unnecessary)."¹¹

In all but two instances the forced movements were from rental properties. Demolition for apartment developments was the principal circumstance behind eviction. Most other forced shifts were due to landlords wishing to repossess dwellings for their own uses, or finding buyers for their properties.

SIZE OF DWELLING

The responses of Edmonton mover households strongly support the contention that intra-urban migration is largely an adaptive response to changing housing needs.¹² The housing dimension of greatest motivating importance is living space. Four out of every ten respondents explained their moves in terms of their previous dwelling being too small for their needs (Table 12). For many households this situation stemmed from increases in family size. Excessive living space, although discussed in the literature, did not emerge as a parallel problem, but this is not surprising as, apart from the fact that fewer households are likely to find themselves in such a situation, it is generally easier to adapt to too much space than to too little

¹¹Boyce, op. cit., p. 23.

¹²All the written analyses and tabular data which follow in this chapter relate to the 317 voluntary mover households.

TABLE 12

REASONS FOR MOVING FROM PREVIOUS RESIDENCE, BY ORIGIN ZONES AND TENURE
(PERCENTAGE OF HOUSEHOLDS CITING EACH REASON)^a

Reasons	Inner Zone N = 101	Middle Zone N = 134	Outer Zone N = 82	Owners N = 35	Renters N = 282	Totals N = 317
Dwelling too Small	46.5	44.0	28.0	37.1	41.1	40.7
Desire to Buy	13.9	25.4	26.8	-	24.8	22.1
Too Far from Work	5.9	20.0	22.0	22.9	15.6	16.4
Dwelling too Costly	12.9	17.9	13.4	17.1	14.9	15.1
Physical Condition of Dwelling	21.8	6.7	8.5	2.9	13.1	12.0
Lack of Privacy	10.9	10.4	2.4	2.9	9.2	8.5
Noise	11.9	5.2	4.9	2.9	7.8	7.3
Social Character of Neighbourhood	8.9	3.7	4.9	11.4	5.0	5.7
Physical Character of Neighbourhood	5.0	2.2	8.5	17.1	3.2	4.7
Poor Management	7.9	1.5	1.2	-	3.9	3.5
Other	18.8	14.9	17.1	22.9	15.9	16.8

^aPercentages are based on the number of voluntary movers and sum to more than 100 as some households cited more than one reason.

Source: Questionnaire Survey, 1972.

The frequency with which inadequate space featured as the principal motivating force varied in line with the intra-urban distribution of dwelling sizes. Thus, inner origin zone residents, reflecting the predominance of small units in their part of the city, gave greatest relative importance to the space factor (Table 12). Space inadequacies were also considered important by outer suburban households, but not to the same extent as by other sections of the mover population. Also reflecting a measure of clustering in small units was the finding that renters, as a group, accorded space considerations greater importance than did owners.

OWNERSHIP ASPIRATIONS

For the sample as a whole, the desire to purchase a home was the second most frequently cited reason for moving (Table 12). In fact, one of the principal conclusions to be drawn from the study in general is the continuing popularity of the home ownership ideal. Many renter migrants who moved on to other rented accommodation casually mentioned that, while the desire to buy was not a consideration in their last shift, they nonetheless hoped to purchase their own home when they built up their savings and/or started a family.¹³

Most respondents spoke of ownership in terms of obtaining financial and, to a lesser extent, psychological security. It is probable that the ownership ideal also reflects some measure of

¹³ More formal expression of this goal emerged from the survey's investigation of future mobility intentions. Sixty-four per cent of the renter respondents who said they planned to move within Edmonton over the next five years indicated that they intended to purchase their next dwelling.

upward social mobility aspirations, but no firm statement can be made to this effect on the basis of the present study's data.

JOURNEY TO WORK

The journey to work is generally accorded little importance in the formulation of the decision to move. This conclusion is often inferred from the observation that most intra-urban moves are relatively short and therefore result in little absolute change in the residence-workplace distance relationship.¹⁴ However, short moves need not always mean that functional change in distance is proportionately minimal. Also, it will be shown in Chapter VIII that while the surveyed households displayed a marked distance bias in their moves, about 40 per cent of the sample moved more than two miles. Obviously, for these households, a meaningful narrowing of the time/distance separation of home and workplace could have been effected.

Tabulation of the household responses revealed that job location may not be quite as insignificant as has previously been supposed (Table 12). Approximately one-sixth of the respondents volunteered excessive distance from work as a reason for moving, making it the third most frequently cited motivation.

Given the overall distribution of employment locations within the urban area, it was not surprising to find that movers originating in the middle and outer suburbs were most inclined to explain their shift on this basis. At the same time, it was expected that renters might be more inclined to shift for reasons of job location than

¹⁴See Boyce, op. cit., p. 23.

owners. This expectation was founded on the assumption that the latter group would generally be more concerned with dwelling and neighbourhood considerations. However, in actual fact, owners were found to have given significantly greater weight to the job location factor than renters.

OTHER FACTORS

Quite a large proportion of the sample indicated excessive costs had precipitated their moves. In the case of a few households, the decision to move was specifically spurred by a rent increase, but this was less common than a general feeling amongst both renters and owners that dwelling returns simply did not justify the expenditure being laid out.

Contrary to Simmons' statement, considerations of neighbourhood social environment failed to emerge as an important factor for the sample as a whole, though the responses do suggest that they are of some importance for owners. Concerns for the physical condition of the neighbourhood also appear to be of quite considerable importance for owners. Meanwhile, in the cases of inner city and renter households, dissatisfactions with the physical conditions of units, problems of noise, and lack of privacy prompted several moves.

SUMMARY

This chapter has considered the factors associated with the decision to move. The initial thrust of the chapter was directed towards the basic nature of the surveyed migrations and revealed that the vast majority of movements were voluntary shifts. While this

general finding was expected, the actual numerical predominance of voluntary moves was considerably greater than what some previous literature has suggested to be the case. Collation of the various reasons offered by households for moving revealed three principal motivating factors: (a) increased living space requirements, (b) ownership aspirations, and (c) excessive distance to work. The relative importance of these factors was found to vary amongst the sub-groups of the mover sample. For example, the living space factor, although primiate for all groups, was of greatest single importance to inner city households, while the journey to work was of particular concern to middle and outer suburban households.

These findings are of interest in several ways. The overwhelming importance of space requirements accords with a number of earlier studies. Particularly interesting is the revealed importance of the journey to work factor as several researchers have rated it as comparatively insignificant. The analyses in this chapter also give first explicit sighting to one of the major issues arising from this study: namely, the relative importance of spatial factors (e.g., space requirements, the separation of residence and workplace, intra-urban residential location) and non-spatial factors (e.g., tenure status, ownership aspirations) in explaining aspects of the intra-urban migration process. This particular issue will be treated in some detail in the concluding chapter of the study.

Chapter V

SPECIFICATION OF RESIDENTIAL ASPIRATIONS

Having made the decision to move, a household is faced with the problem of searching the vacancies on the housing market for a dwelling matching its particular requirements. Before the actual search for a dwelling can begin, however, the household has to decide what residential features it specifically wishes to obtain by relocating. The features thus explicated can then act as criteria for evaluating vacancies.

Actually, depending on the motivating factors attending a particular decision, one or two key criteria might already be explicit by the time the decision to move is reached. Brown and Moore suggest that, until that decision is made, a household's residential requirements remain implicit, being apparent only in terms of a transition from an expression of satisfaction to one of dissatisfaction with some aspect(s) of their present residence.¹ For example, households considering moving due to excessive rents or distances to workplaces may not have any firm ideas on how much they are prepared to pay, or how close they actually wish to be to their workplaces. However, in some instances it is likely that dissatisfaction will already have been translated into a firm aspiration before the actual decision to move is finalized. Thus, a household faced with inadequate living space may see the issue largely in terms of the need to

¹L. A. Brown and E. G. Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, Series B, Vol. 52, 1970, pp. 4-5.

obtain a unit with one more bedroom and use this 'solution' as a consideration in arriving at the movement decision.

While specifications will obviously vary from household to household, previous research has suggested that some considerations are common to many households. Rossi found that:

The bulk of the specifications concerned the dwelling unit itself. People were looking for a particular kind of apartment or house and were much less concerned with its social environment.²

In a Chicago study, Peterson discerned two basic dimensions of housing preferences: (a) newness-expensiveness and (b) closeness to nature.³ However, the variables used in that study were limited to the external appearance of dwellings and, thus, only provide a partial perspective of household preferences. Meanwhile, a recent national survey of intra-metropolitan moves in the United States indicated that, in the aggregate, metropolitan households prefer:

1. Better neighbourhood quality with either a less desirable housing unit or less accessible location over a less desirable neighbourhood with either a better housing unit or better accessibility.
2. A place that has a very nice appearance inside and less desirable outside appearance to a place that presents a very nice outside appearance but less desirable appearance inside.
3. A conflicting combination of a new or fairly new house together with a well-established neighbourhood.
4. Modern architectural style to traditional.
5. A housing unit all on one floor.
6. Few children in the neighbourhood.

²P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, p. 155.

³G. L. Peterson, "A Model of Preference: Quantitative Analysis of the Perception of the Visual Appearance of Residential Neighborhoods," Journal of Regional Science, Vol. 7, 1967, pp. 19-32.

7. Large lots to small lots.⁴

These assorted findings do not necessarily contradict each other. Rather, they reflect the differing approaches and emphases of the various studies. For example, Rossi's conclusions were based on responses to a question asking - "What were the important things you had in mind about a place when you were looking around?" Peterson, on the other hand, asked respondents to rank photographs of different housing scenes in terms of their desirability along certain residential dimensions. Meanwhile, the cited findings of the national survey represent responses to a series of formal paired comparison questions.

Existing studies thus provide some insights into intra-urban migrant aspirations. However, as Brown and Moore state in a discussion of important lines for future research on the search and evaluation portions of the migration decision, further survey investigations are required to identify relevant variables describing intra-urban migrant aspirations.⁵ The purpose of this chapter, therefore, is to attempt to identify the principal residential aspirations which the Edmonton mover households specified once they made their decisions to move.

To some degree, household aspiration sets should follow from the reasons for moving presented in the last chapter. Accordingly, it is likely that site and dwelling specific considerations

⁴E. W. Butler et al., Moving Behavior and Residential Choice: A National Survey, National Cooperative Highway Research Program, Report No. 81, Washington, Highway Research Board, 1969, p. 2.

⁵Brown and Moore, op. cit., p. 10.

will predominate. Financial and accessibility factors should also emerge as important to many households. However, various other factors which did not appear in the reasons analysis are likely to emerge at the specification stage.⁶ Also, those factors which did appear as important motivations for moving are likely to be expressed more explicitly at this stage.

The analyses which follow draw upon responses to two questions, one open-ended, the other closed. The open question was posed first and asked respondents what specific residential requirements they set themselves to obtain once they had decided to seek a new dwelling. The closed question required the households to rate the degree of importance they assigned to a number of listed factors when they were looking for a new residence. The collated responses to the open question are presented in Table 13, and the closed question in Table 14.⁷ For the purposes of these analyses, the mover sample is examined as a whole and in terms of destination zone and tenure status.

SITE AND DWELLING FACTORS

As predicted from the reasons analysis, requirements relating to 'site and dwelling' were most frequently voiced as having been of principal concern (Table 13). One-third of the total sample

⁶For example, space requirements or financial factors may not be cited as reasons for moving, but they will likely be important considerations in the evaluation of inspected vacancies.

⁷The tabulated data indicate a close relationship between the responses to the open and closed questions, in so far as they are comparable.

TABLE 13

FIRST MENTIONED RESIDENTIAL ASPIRATIONS, BY DESTINATION ZONES AND TENURE
(PERCENTAGE OF HOUSEHOLDS)

Aspirations	Inner Zone N = 91	Middle Zone N = 122	Outer Zone N = 112	Satellite Centers N = 17	Owners N = 110	Renters N = 232	Totals N = 342
Site and Dwelling Features	16.5	36.0	42.0	52.9	40.9	30.2	33.6
Close to Work	35.2	23.8	15.2	-	14.6	26.7	22.8
Financial	24.1	25.4	17.0	17.6	18.2	23.7	21.9
General Accessibility	8.8	5.7	8.0	-	5.5	7.8	7.0
Physical Character of Neighbourhood	7.7	2.5	10.7	5.9	12.7	3.9	6.7
General Location	5.5	2.5	5.3	-	4.5	3.9	4.1
Social Character of Neighbourhood	2.2	2.5	0.9	11.8	1.8	2.6	2.4
Services and Facilities of Neighbourhood	-	-	0.9	5.9	0.9	0.4	0.6
Other	-	1.6	-	5.9	0.9	0.8	0.9
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Questionnaire Survey, 1972.

rated some aspect of this factor as their prime aspiration.⁸ The total sample response pattern, however, marks considerable variation between different groups of movers.

In this respect, destination location appears as a particularly important variable. Considered at the zonal level, the importance allocated to site and dwelling factors increased monotonically with destination distance from the city center. Thus, in the case of inner city locators, site and dwelling aspirations rated a distant third behind accessibility to work and financial considerations. In striking contrast, for outer suburban and satellite center households, site and dwelling requirements completely dominated aspiration sets.

Renters, as a group, assigned less importance to these factors than did owners. However, when households were cross-tabulated according to destination location and tenure, a more complex picture emerged. As has been seen, inner city households downgraded site and dwelling factors relative to several other considerations. In turn, nearly all inner city locators were renters and the aspiration sets of these renters acted to reduce the overall importance of these factors for renters as a whole. Renters in the middle and outer suburbs, though, rated site and dwelling aspects of greatest importance and, in fact, in both cases showed a slightly greater inclination towards these factors than did their zonal owner counterparts.

⁸Sixty per cent of the site and dwelling aspirations related to space dimensions.

Narrowing the perspective to the specific dimensions of site and dwelling, two considerations were of paramount importance: the number of rooms and the state of repair (Table 14). Secondary, but nonetheless highly important factors, were size of rooms, interior design, and the presence of a basement. The relative importance of these factors varied somewhat from group to group.

Inner city households gave greater importance to the size of rooms than to the actual number of rooms. This perhaps reflects a belief that inner city accommodation varies comparatively little in terms of number of rooms, but that meaningful size of room variations can be found and capitalized upon. Indeed, as Table 14 reveals, after room size these movers were more concerned with state of repair than the number of rooms.

Middle suburban locators mirrored the pattern for the mover sample as a whole, focussing on number of rooms and state of repair. Outer suburban households also supported these two considerations, though, at the same time gave above average rating to size of rooms, basement and interior design requirements. Satellite center movers emphasized state of repair, basement and lot size considerations, and tended to down-play the space dimension of dwellings, possibly indicating that these were so taken for granted that they were not considered as explicit specifications.⁹

Owners, as a whole, were concerned for a greater

⁹This tendency was also observed by Rossi, op. cit., pp. 155-157.

TABLE 14

FACTORS RATED 'VERY IMPORTANT' IN THE EVALUATION OF DWELLINGS, BY DESTINATION ZONES AND TENURE
(PERCENTAGE OF HOUSEHOLDS)

Factors	Inner Zone N = 91	Middle Zone N = 122	Outer Zone N = 112	Satellite Centers N = 17	Owners N = 110	Renters N = 232	Totals N = 342
Accessibility to:							
Downtown	33.0	18.9	11.6	11.8	15.4	21.9	19.9
Head's Site of Employment ^a	46.1	44.2	23.4	13.3	28.0	40.4	36.4
Spouse's Site of Employment ^b	45.0	46.3	21.4	-	22.9	41.6	36.0
Shopping	22.0	19.7	14.3	-	16.3	18.1	17.5
Schools	11.0	27.0	44.6	35.3	42.7	22.4	28.9
Church	6.6	5.7	8.9	-	6.3	6.8	6.7
Friends and Relatives	5.5	3.3	2.7	-	0.9	4.7	3.5
Recreational Areas	14.3	12.3	8.0	11.8	9.0	12.5	11.4
Public Transportation	35.2	21.3	19.6	-	15.4	27.1	23.4
Major Highways	4.4	4.1	7.1	11.8	3.6	6.4	5.6
Physical Characteristics of Neighbourhood:							
Layout (e.g. streets)	18.7	16.4	33.0	35.3	33.6	18.5	23.4
Condition (e.g. streets, sidewalks)	23.1	12.3	41.1	52.9	39.0	20.6	26.6
Spaciousness	22.0	25.4	45.5	58.8	40.9	28.8	32.7
Aesthetic Aspects	16.5	23.8	30.4	23.5	30.9	20.6	24.0
Quietness	38.5	36.1	41.1	58.8	51.8	33.6	39.5
Variety of Housing Styles	9.9	4.9	17.0	17.6	18.1	7.3	10.8
Services and Facilities of Neighbourhood:							
Public Utility Services	18.7	27.0	37.5	35.3	41.8	22.4	28.7
Police and Fire	9.9	14.8	19.6	35.3	20.9	13.7	16.1
Social Environment of Neighbourhood:							
Neighbourhood Reputation	15.4	25.4	37.5	35.3	38.1	21.9	27.2
Neighbours of Similar Socio-Economic Level	7.7	9.8	20.5	11.8	18.1	10.3	12.9
Neighbourhood Friendliness	11.0	13.1	19.6	23.5	15.4	15.0	15.2

TABLE 14 (CONTINUED)

Factors	Inner Zone N = 91	Middle Zone N = 122	Outer Zone N = 112	Satellite Centers N = 17	Owners N = 110	Renters N = 232	Totals N = 342
Site and Dwelling:							
'New' Dwelling	8.8	4.9	32.1	35.3	31.8	9.0	16.4
Large Lot	5.5	13.9	25.9	58.8	30.9	11.6	17.8
Exterior Design	9.9	6.6	22.3	11.8	22.7	8.1	12.9
Interior Design	33.0	27.0	48.2	35.3	50.9	28.8	36.0
Number of Rooms	40.7	50.0	62.5	23.5	54.5	48.2	50.3
Size of Rooms	47.3	33.6	51.8	23.5	41.8	43.1	42.7
Garage	17.6	23.8	25.9	29.4	34.5	17.6	23.1
Basement	9.9	25.4	50.9	64.7	54.5	20.6	31.6
State of Repair	45.1	43.4	58.0	64.7	55.4	46.9	49.7
Financial Factors:							
Upper Price Limit	52.7	54.1	41.1	35.3	48.1	48.7	48.5
Lower Price Limit	6.6	22.1	20.5	29.4	21.8	15.9	17.8
Resale Potential	6.6	14.8	37.5	70.6	62.7	3.8	22.8

^aPercentages based on number of households in which the head was employed: Inner = 89; Middle = 120; Outer = 111;
 Satellite = 15; Total households = 335.

^bPercentages based on number of households in which the spouse was employed: Inner = 40; Middle = 67; Outer = 42;
 Satellite = 12; Total households = 161.

Source: Questionnaire Survey, 1972.

range of factors than renters.¹⁰ Both groups rated number and size of rooms and state of repair as very important. Owners, in addition, placed considerable emphasis on basement and interior design requirements.

In some ways, equally informative insights are provided on mover aspiration sets by those factors generally accorded as unimportant. In this respect, 'new' dwelling, lot size, exterior design, and garage requirements emerged, with some minor exceptions, as being of relatively little consequence.

JOURNEY TO WORK

The desire to be close to work was the second most important criterion specified by the migrant households. Although a good deal less important than site and dwelling considerations, it was the prime specification of almost one-quarter of the surveyed households (Table 13).

Considerable between-group variations also characterized this factor. Despite the fact that the importance of central city employment is declining for the North American urban population at large, it is nonetheless undoubtedly still true to say that, on the whole, an inner city residential location places one closer to one's workplace than does a suburban location. Given this situation, it is likely that inner city locators will, in the aggregate, place more

¹⁰This was true of renter and owner aspiration sets in general as well as for features specific to the site and dwelling. In response to Question 10, owners volunteered an average of 4.1 aspirations, whereas renters only averaged 3.5.

significance on accessibility to work than other urban households.

Table 13 shows that this expectation is strikingly borne out by the Edmonton data. For instance, whereas 35.2 per cent of the central city households rated closeness to work as their principal specification, not a single satellite center household rated it so. A corollary of this finding was that renters proved to be more concerned with locating close to their workplaces than owners.¹¹

Traditionally, the journey to work factor has been associated with the head of the household's workplace. However, the steadily increasing importance of female participation in the urban labor force may require the traditional models to be revised. This at least is the inference to be drawn from the present study. As anticipated, the survey revealed accessibility to the head's site of employment to be an important specification in the eyes of many households. Indeed, approximately 40 per cent of the total sample rated it as very important. Less expected, though, was the finding that an identical proportion of the households in which the spouse worked rated accessibility to the spouse's workplace as a very important criterion in their evaluation of inspected dwellings (Table 14).

Unfortunately, the questionnaire survey made no inquiries about household car ownership or modes of transport to work. In the absence of direct data, it can only be suggested that the importance assigned to accessibility to the spouse's workplace to

¹¹This differential had been intuitively expected. Nonetheless, it was interesting to confirm it, particularly in view of the previous chapter's unexpected finding that owners cited excessive distance from work as a reason for moving proportionately more frequently than renters.

some degree likely reflects, in the case of one-car families in which both husband and wife work, a situation where the husband uses the car to get to work, thereby leaving the wife essentially dependent upon public transportation or walking.

FINANCIAL FACTORS

Next in importance as specific residential requirements were financial factors. Slightly more than one-fifth of the migrant households intimated that some aspect of finance had been their first consideration. In fact, one might intuitively suspect that this factor was probably the key concern of an even larger proportion of the households, but that it was taken for granted and did not emerge as an overt specification. The data in Table 14 lend some support to this contention as they indicate that when specifically queried about finance, half the respondents rated an upper price limit as a very important consideration.

Renters, as a group, showed a greater concern for financial factors than owners (Table 13). Although the rationale behind this aspect of search behavior was not pursued, it seems likely that renters are very conscious of the fact that their financial outlays bring no permanent return and, thus, are anxious to avoid paying high rents. On the other hand, households paying off dwellings likely appreciate the fact that they are building up equity and, thus, are not as likely to rate financial factors as their chief consideration. Of course this is not to deny that the vast majority of owners have to operate within certain financial limitations. This reality is apparent from Table 14 which shows owners were as equally concerned as renters with upper

price limits when specifically asked about them.

Even so, the financial factor of greatest weight to owners was not an upper price limit, but rather a concern for resale potential. Almost two-thirds of the households which purchased their destination dwelling indicated that this was a very important criterion in their evaluation of inspected units. In fact, when presented with a list of factors, more owner households rated resale potential as very important than any other single factor (Table 14). This finding suggests that most mover households fully expect to move again in the future, and at that time obviously want to have no trouble disposing of their present home.

OTHER FACTORS

The three sets of factors already discussed: site and dwelling, journey to work, and finance, dominated the households' aspiration sets. Cumulatively, they accounted for just under 80 per cent of the first mentioned residential aspirations (Table 13). This heavily biased response pattern is also interesting from the point of view of identifying the factors generally not considered to be of prime importance by mover households. In this respect, the physical and social character of neighbourhoods emerged as noticeably insignificant factors (Table 13).

A further indication of the measure of this insignificance is given by the fact that the individual dimensions of these factors were generally assigned minor importance even when specifically posed to the respondents. Nonetheless, there were one or two exceptions to this pattern. For example, with regard to the physical character of

neighbourhoods, quietness was rated as a very important requirement by 40 per cent of the sample (Table 14). Spaciousness also ranked high in the estimation of a fairly large proportion of households. Generally speaking, these attributes are most readily attained in peripheral areas of the city and, thus, it was no surprise to find that they were most commonly mentioned as desired features by households settling in the outer suburbs and satellite centers.

A similar response pattern was obtained with respect to neighbourhood social character. Outer city, satellite center, and by dint of association, owner households, showed somewhat of a concern for neighbourhood reputation. However, little importance was given to locating amongst people of similar socio-economic status. Likewise, neighbourhood friendliness, by nature a difficult factor to assess while searching, held little sway in most household evaluations.

Finally, a factor of quite considerable importance to certain elements of the sample was location relative to schools. As Table 14 indicates, this factor was rated highly by outer city and owner households, reflecting the relative concentration of school age children in those particular segments of the mover population.

SUMMARY

Once a household resolves to move, it has to decide what residential features it wishes to obtain by moving to a new dwelling. These aspirations are then used as evaluatory criteria in the search process. This chapter has attempted to identify the principal components of household aspiration sets.

As was the case with the reasons for moving, three

variables emerged as being particularly important aspirations. These were: (a) site and dwelling features, (b) the journey to work, and (c) financial considerations. Each of these variables was considered in terms of destination location and tenure status. Inner city locators placed greatest emphasis on accessibility to work, whereas middle, outer, and satellite zone households were most concerned for site and dwelling features. Owners, as a group, also tended to cluster heavily on site and dwelling specifications. Renters, on the other hand, showed relatively equal concern for all three major factors.

Chapter VI

RESIDENTIAL INFORMATION SEEKING¹

Deliberate information seeking is widely recognized as a fundamental dimension of residential search behavior.² In some instances, unsolicited information about dwelling vacancies may be given to a household, but for most households the finding of alternative accommodation requires active utilization of the various residential information channels.

Present knowledge of the information sources used in residential search is incomplete and largely derives from Rossi's well-known Philadelphia study.³ Rossi examined five information sources - newspapers, personal contacts, walking or riding around, real estate agents and windfalls - from the perspectives of coverage

¹As noted in the Introduction of this study, one approach to the investigation of information flows and migration has been via the concept of "mean information fields." For example see R. L. Morrill and F. R. Pitts, "Marriage, Migration, and the Mean Information Field: A Study in Uniqueness and Generality," Annals of the Association of American Geographers, Vol. 57, 1967, pp. 401-422; and W. A. V. Clark, "Information Flows and Intra-Urban Migration: An Empirical Analysis," Proceedings of the Association of American Geographers, Vol. 1, 1969, pp. 38-42. However, the present study does not follow this approach. Rather, emphasis is placed on actual purposive information gathering by migrant households and the characteristics of the collected information.

²See L. A. Brown and E. G. Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, Series B, Vol. 52, 1970, pp. 1-13; D. J. Hempel, "Search Behavior and Information Utilization in the Home Buying Process," in P. R. McDonald (ed.), Marketing Involvement in Society and the Economy, Proceedings of the 1969 Conference of the American Marketing Association, 1970, pp. 241-249; and P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, 220 pp.

³Rossi, op. cit., pp. 159-162.

(the proportion of households using a particular source) and impact (the proportion of all chosen dwellings found by a particular source).⁴ By dividing each impact proportion by its corresponding coverage proportion, an index of effectiveness was obtained. The indices thus derived indicated windfalls and personal contacts were the most effective sources.

More recently, Hempel has investigated various aspects of information gathering, but to date the findings of this study have not been as widely disseminated as those of Rossi.⁵ Hempel looked at information sources from the points of view of exposure and effectiveness. Exposure was expressed as the proportion of home buyers who referred to a particular information source for assistance in making various decisions. Effectiveness was measured as the number of buyers who rated the channel as the most influential source of information for a particular decision. Hempel's overall finding was that the relative importance of individual information sources was related to the type of decision for which the information was obtained. For example, non-commercial sources were found to be most significant for decisions regarding the social dimensions of the housing product, whereas commercial sources of information were more influential for decisions pertaining to technical matters.

Rossi and Hempel have thus provided some interesting

⁴The proportion of households found to have used each of these sources was 63%, 62%, 57%, 50%, and 31%, respectively. The proportion of effective use (impact) for each source was 18%, 47%, 19%, 14%, and 25%, respectively.

⁵Hempel, op. cit.

insights into the residential information gathering process. However, these insights are fragmentary and need elaborating upon. In fact, Brown and Moore identify the information search characteristics of migrant households as one broad area for future research.⁶ The analyses in the present chapter attempt to shed further light on these characteristics. Three general questions are examined: (1) to what extent are some information sources more widely used and effective than others? (2) to what extent do information sources differ in terms of vacancy types? (3) to what extent are information flows spatially biased?

USE AND EFFECTIVENESS OF INFORMATION SOURCES

It has been noted above that Rossi found information sources varied considerably in terms of frequency of use and effectiveness. Specifically, newspapers and personal contacts were found to be the most commonly used sources, with the latter also being the most effective means of obtaining a new dwelling.⁷ Unfortunately, this dimension of information gathering has been neglected by subsequent researchers. Thus Rossi's findings, although frequently referred to, essentially remain to be confirmed by other studies.⁸ Consequently, this section is given to an analysis of the Edmonton

⁶Brown and Moore, op. cit., p. 11.

⁷Rossi, op. cit., pp. 160-161.

⁸See Brown and Moore, op. cit., p. 9; and E. G. Moore, Residential Mobility in the City, Commission on College Geography, Resource Paper No. 13, Washington, Association of American Geographers, 1972, p. 15.

survey data in terms of Rossi's concepts of coverage and impact. The importance of disaggregating the mover sample into relevant sub-groups is also emphasized.

The empirical data are presented in Tables 15-17. Table 15 summarizes the situation for the total sample and can be directly compared with Rossi's findings. With regard to coverage, the data reveal that no one source is used by all movers, thus emphasizing that the mover population is selective in its utilization of information channels.

In terms of specific source selectivity, the Edmonton data show some major divergencies from Rossi's results. For Edmonton households, walking and driving around the urban area was the most frequently used method of locating vacancies, whereas in Philadelphia this channel was only of tertiary importance. On the other hand, personal contacts were highly utilized by Philadelphians but considerably less so by Edmontonians. Furthermore, in both cities real estate agents ranked only fourth in coverage, but in Philadelphia this translated to 50 per cent of the mover households, whereas in Edmonton the proportion was only one in four.

Walking and driving was also the leading information channel for Edmontonians from the point of view of leading searchers to the vacancy which they finally selected. Exactly one-third of the dwellings were found in this manner. Newspapers had the second greatest impact, followed by friends and relatives.⁹ Real estate firms

⁹In the Philadelphia study, personal contacts were found to have had greatest impact, 47 per cent of all dwellings being located in this manner. Rossi, op. cit., p. 161.

TABLE 15

ASSESSMENT RATINGS OF INFORMATION SOURCES,
TOTAL SAMPLE^a

Information Source	Coverage (Proportion Using Source)	Impact ^b (Proportion Effective Use)	Index of Effectiveness ^c
Newspaper	65.5	27.8	.42
Real Estate Agents	26.9	12.6	.47
Walking and Driving	69.9	33.0	.47
Friends and Relatives	43.6	24.0	.55
Other	3.8	2.6	.68

^aN = 342 households.

^bProportion of chosen dwellings found by each source.

^cIndex of Effectiveness = Impact ÷ Coverage

Source: Questionnaire Survey, 1972.

and other sources were of comparatively minor importance.

However, as Rossi points out, to gauge the real effectiveness of a medium it is necessary to consider both coverage and impact. Rossi-type indices of effectiveness (Impact ÷ Coverage) for each information source are listed in the third column of Table 15.

By this measure, 'other'¹⁰ sources and 'friends and relatives' emerged as the most effective channels. The other three channels were of somewhat lower and generally similar effectiveness.

Thus, although the Edmonton data differ in parts from Rossi's findings on channel specific coverage and impact, both studies

¹⁰This includes such sources as lawyers and finance companies. While very few households used such sources, those that did found them very effective.

at least suggest that, of the major information sources, personal contacts are the most effective means of obtaining a new dwelling.¹¹ At the same time, it is interesting to note that the actual effectiveness of personal contacts in Edmonton was significantly less than that observed by Rossi. Furthermore, newspapers, real estate agents, and walking and driving, though of secondary effectiveness in both cities, were nonetheless considerably more effective than in Philadelphia.

To bring the investigation of information coverage and impact into finer focus, the mover sample was disaggregated into subgroups on the basis of the nature of the moves (i.e., voluntary versus forced) and destination tenure status. The empirical findings for these groups are given in Tables 16 and 17. The main point to emerge from the voluntary/forced classification was that forced movers make particularly widespread use of newspapers, no doubt reflecting the ready accessibility and relatively comprehensive scope of that source. Furthermore, newspapers proved to be particularly effective sources for these movers.

The data on renters and owners (Table 17) clearly emphasize the need to go beyond the aggregate sample in the analysis of information flows. Most pertinent in this respect is the fresh

¹¹Diffusion research has also generally revealed personal communications to be the most effective. See L. A. Brown, Diffusion Processes and Location: A Conceptual Framework and Bibliography, Philadelphia, Regional Science Research Institute, Bibliography Series No. 4, 1968, 177 pp.; P. R. Gould, Spatial Diffusion, Commission on College Geography, Resource Paper No. 4, Washington, Association of American Geographers, 1969, 72 pp.; and T. Hagerstrand, "Aspects of the Spatial Structure of Social Communication and the Diffusion of Information," Papers and Proceedings of the Regional Science Association, Vol. 16, 1966, pp. 27-42.

TABLE 16

ASSESSMENT RATINGS OF INFORMATION SOURCES,
VOLUNTARY^a AND FORCED^b MOVERS

Information Source	Coverage (Proportion Using Source)		Impact ^c (Proportion Effective Use)		Index of Effectiveness ^d	
	Voluntary	Forced	Voluntary	Forced	Voluntary	Forced
Newspaper	63.4	92.0	25.2	60.0	.40	.65
Real Estate Agents	25.6	44.0	12.3	16.0	.48	.36
Walking and Driving	71.3	52.0	35.3	4.0	.50	.08
Friends and Relatives	43.2	48.0	24.3	20.0	.56	.42
Other	3.5	8.0	2.8	-	.80	-

^aN = 317 households.^bN = 25 households.^cProportion of chosen dwellings found by each source.^dIndex of Effectiveness = Impact ÷ Coverage

Source: Questionnaire Survey, 1972.

perspective thrown on realtors as information sources. As will be shown in the following section, realtors tend to concentrate on houses for sale. Comments from the surveyed households indicated that many movers were aware of this specialization. Consequently, in a migrant sample such as the present one in which renters outnumber owners, it is to be expected that the coverage of realtor information will be relatively limited for the sample as a whole. However, a different picture emerges when the sample is disaggregated by tenure status. Thus, as Table 17 shows, almost two-thirds of the owner households used realtors as information sources. Furthermore, for households purchasing homes, realtors emerged as the single most effective means

TABLE 17

ASSESSMENT RATINGS OF INFORMATION SOURCES,
BY DESTINATION TENURE

Information Source	Coverage (Proportion Using Source)		Impact ^c (Proportion Effective Use)		Index of Effectiveness ^d	
	Owners ^a	Renters ^b	Owners	Renters	Owners	Renters
Newspaper	68.2	64.2	19.1	31.9	.28	.50
Real Estate Agents	64.5	9.1	36.4	1.3	.56	.14
Walking and Driving	75.5	67.2	28.2	35.3	.37	.52
Friends and Relatives	35.5	47.4	16.4	27.6	.46	.58
Other	1.8	4.7	-	3.9	-	.83

^aN = 110 households.^bN = 232 households.^cProportion of chosen dwellings found by each source.^dIndex of Effectiveness = Impact + Coverage

Source: Questionnaire Survey, 1972.

of obtaining a new dwelling.

To conclude this section, it may be noted that the patterns of information coverage and impact by the Edmonton data are generally consistent with the findings of marketing research. Essentially there are two basic types of information source for housing consumers: marketer dominated channels and consumer dominated channels.¹² Alternatively, these may be classified, respectively, as

¹²For general discussions of the types and characteristics of information sources see D. F. Cox, "The Audience as Communicators," in S. A. Greyser (ed.), Toward Scientific Marketing, Proceedings of the 1963 Conference of the American Marketing Association, 1964, pp. 58-72; and F. E. Webster, Marketing Communication: Modern Promotional Strategy, New York, Ronald Press, 1971, 694 pp.

commercial and non-commercial sources. By marketer channels are meant all means of communicating which fall under the direct control of the marketer. Real estate firms and newspaper advertisements obviously come within this category. Meanwhile, consumer channels are those inter-personal sources of information which are not under the direct control of the marketer. Accordingly, walking and driving and personal contacts fall into this category.

Cox has suggested that consumers actively seeking information will try to choose the sources which appear to achieve an optimum combination of information cost and value.¹³ In a similar vein, Brown and Moore have hypothesized that an intended migrant household's choice of channels (and the choice of intensity with which each channel is sampled) is dependent upon the subjective probability of success from using a particular channel, the perceived effort involved in using a particular channel, and the time available to the household to make a location decision.¹⁴

These statements essentially come down to the notion of source credibility. The credibility a consumer ascribes to a source is generally seen: (a) to be a function of perceived trustworthiness and expertise, and (b) to condition the utilization and effectiveness of the source.¹⁵

With respect to credibility, both types of information

¹³Cox, op. cit., p. 63.

¹⁴Brown and Moore, op. cit., p. 9.

¹⁵See Webster, op. cit.

channel have distinct advantages and disadvantages.¹⁶ Marketer dominated sources are disadvantageous in the sense that they are generally perceived by consumers to have a strong manipulative intent. At the same time, though, they offer consumers a large fund of technically accurate information at comparatively low cost. Consumer channels, on the other hand, are more trustworthy in the sense that financial manipulative intent is generally absent. However, they are also less competent and comprehensive in scope.

Turning to the survey data in the light of these comments, several observations can be made. Firstly, the widespread utilization of walking and driving follows logically from the trustworthiness dimension of consumer sources. Conversely, comments made by various respondents suggest that low use of realtors to some extent stems from adverse consumer perceptions of this dimension of realtor information.¹⁷ Meanwhile, the common use made of newspapers likely reflects the ease with which this information can be obtained. Finally, the greater effectiveness of personal contacts (friends and relatives) is accordant with the high trustworthiness and flexibility generally ascribed to communications of this nature.

SELECTIVITY OF INFORMATION SOURCES: TYPES OF VACANCIES

The data collected in the household questionnaire survey suggest that residential information sources are highly biased with

¹⁶Loc. cit.

¹⁷However, also note the previous comments on household tenure status and information sources.

respect to the types of dwelling vacancies they advertise.¹⁸ The present section briefly examines the nature of these biases.

The number of inspected apartments and houses located by each information source are presented in Table 18. This table clearly indicates that information gained from realtors is the most weighted of all sources, being almost purely selective of houses. As noted in the preceding section, many households indicated that they were aware of this specialization. A postal questionnaire survey of selected realtors provided further evidence of this bias.¹⁹ Of seventeen responding firms, seven indicated they dealt completely in houses (almost entirely for sale), while for the seventeen firms as a whole, apartments averaged only 5 per cent of the units dealt with.²⁰

The survey data also indicate newspaper and personal contact information to be biased towards housing units. Walking and driving, on the other hand, showed a bias towards apartment units.

AREAL AND DISTANCE BIASES OF INFORMATION SOURCES

In their discussion of the relocation decision, Brown

¹⁸Information sources will also be selective in terms of the quality of the dwellings they advertise. See Brown and Moore, *op. cit.*, p. 7. However, the questionnaire survey gathered no data on this dimension.

¹⁹Seventy-five real estate firms were selected at random from the listings in the 1971 Edmonton Telephone Directory. Twenty-two firms completed and returned the questionnaire, but of this number only seventeen were involved with residential real estate. A further nine questionnaires were returned uncompleted, the firms having apparently ceased operations. See Appendix D for the questionnaire schedule.

²⁰One firm indicated that most of its business was in property management.

TABLE 18

NUMBER OF INSPECTED DWELLING UNITS LOCATED
BY EACH INFORMATION SOURCE^a

Type of Unit	News-paper	Real				Totals
		Estate Agents	Walking and Driving Around	Friends & Relatives	Other	
Apartments	181	5	425	60	4	675
Houses	403	341	338	124	8	1,214
Totals	584	346	763	184	12	1,889

^aThese data refer to the 310 respondents who were able to remember the information channel which led them to each inspected dwelling.

Source: Questionnaire Survey, 1972.

and Moore note that information sources are spatially selective.²¹

Some brief insights on this feature are provided by Rossi.²² In the case of the central city, walking and driving were found to be the most frequently employed means of looking for a new place. On the other hand, real estate agents were particularly important in his study area on the northern outskirts of Philadelphia. No attention, however, was paid to the distance dimensions of information.

Areal Biases

The areal dimensions of information can be approached from several perspectives. For the purposes of this study, the zonal distribution of all inspected dwellings was calculated and used as a

²¹Brown and Moore, op. cit., p. 7.

²²Rossi, op. cit., p. 162.

base. The zonal distributions of the vacancies found by each source were then compared with the overall zonal distribution in the following manner:

$$\frac{\% \text{ of all inspected dwellings found by Source X located in Zone A}}{\% \text{ of all inspected dwellings located in Zone A}} \times 100$$

to yield an index of relative zonal concentration for each source.²³

The relevant percentages and indices are presented in Table 19.

The indices thus derived tend to support Rossi's findings. Thus, walking and driving was most important in locating inner city vacancies, while realtors were of greatest relative significance in the outer suburbs. The importance of walking and driving in the central city undoubtedly stems from the fact that large numbers of apartment vacancies are available in a comparatively confined area. Furthermore, many apartment blocks display on-site vacancy signs and thereby facilitate the discovery of vacancies. Also, as was shown in the preceding section, realtors and, to a degree, newspapers are oriented towards single-family housing units and thus are less likely to provide satisfactory information on inner city accommodation than walking and driving. Meanwhile, the importance of realtors in the outer suburbs derives largely from their emphasis on single-family units for sale.

Friends and relatives proved to be of greatest relative importance in directing search towards satellite centers. It is interesting to speculate that the decision to search in these centers perhaps

²³An index over 100 represents above average concentration.

TABLE 19

ZONAL DISTRIBUTION OF INSPECTED VACANCIES,
BY VACANCY INFORMATION SOURCES

Information Source		Inner Zone	Middle Zone	Outer Zone	Satellite Centers	Totals
Newspaper	a.	97	213	222	52	584
	b.	16.6	36.5	38.0	8.9	100.0
	c.	83	111	97	105	
Real Estate Agents	a.	29	123	166	28	346
	b.	8.4	35.5	48.0	8.1	100.0
	c.	42	108	123	96	
Walking and Driving	a.	221	218	274	50	763
	b.	29.0	28.6	35.9	6.5	100.0
	c.	145	87	92	77	
Friends and Relatives	a.	30	56	69	29	184
	b.	16.3	30.4	37.5	15.8	100.0
	c.	81	92	96	188	
Other ^d	a.	1	9	2	-	12
	b.	*	*	*	*	*
	c.	*	*	*	*	*
Totals	a.	378	619	733	159	1,889
	b.	20.0	32.8	38.8	8.4	100.0

^aZonal distribution of vacancies found by source (number of units).^bZonal distribution of vacancies found by source (percentages).^cIndex of relative concentration (see text).^dPercentages and concentration indices not calculated due to small numerical base.

Source: Questionnaire Survey, 1972.

represents something of a turning away from city life and that information provided by personal contacts is particularly valued in such circumstances.

In contrast to these three sources, newspapers showed

TABLE 20

DISTANCES OF INSPECTED VACANCIES FROM ORIGIN RESIDENCES, BY VACANCY INFORMATION SOURCES^a (PERCENTAGE OF VACANCIES)

Distances (Miles)	Real Estate					Totals N = 1,718
	Newspaper N = 532	Agents N = 318	Walking & Driving N = 713	Friends & Relatives N = 155		
Less than 0.5	12.4	11.3	20.2	25.8	16.6	
0.5 - 0.9	15.0	15.7	14.0	8.4	14.1	
1.0 - 1.4	12.0	9.4	11.7	10.3	11.2	
1.5 - 1.9	7.2	12.6	7.4	3.8	8.0	
2.0 - 2.4	9.2	5.0	7.0	7.1	7.3	
2.5 - 2.9	9.2	5.7	9.8	6.4	8.6	
3.0 - 3.4	3.4	7.2	5.8	3.2	5.1	
3.5 - 3.9	6.0	6.9	5.9	5.2	6.1	
4.0 - 4.4	3.8	4.4	3.9	11.0	4.6	
4.5 - 4.9	5.1	5.4	3.5	7.1	4.7	
5.0 - 5.4	1.9	3.1	1.5	5.2	2.3	
5.5 - 5.9	4.1	6.0	2.0	-	3.2	
6.0 - 6.4	2.3	5.4	1.4	2.6	2.5	
6.5 - 6.9	1.7	-	1.3	2.6	1.3	
7.0 - 7.4	3.0	1.6	0.7	-	1.5	
7.5 - 7.9	1.3	0.3	2.4	-	1.4	
8.0 and over	2.4	-	1.5	1.3	1.5	
Totals	100.0	100.0	100.0	100.0	100.0	

^aVacancies inspected in satellite centers (N = 159) and those found by "Other" sources (N = 12) are excluded.

Source: Questionnaire Survey, 1972.

comparatively little sign of any areal selectivity.

Distance Biases

As was anticipated, all information sources evidenced signs of distance bias in terms of the dwellings they led households to. However, the actual degree of bias was noticeably greater in some sources than in others (Table 20). Specifically, walking and driving,

and friends and relatives emerged as being especially biased. A little over one-third of all the inspected vacancies found by these two sources were within a mile of the origin residences of the searching households. These particular findings accord with the patterns postulated by Brown and Moore on the basis of the distance decay properties of household acquaintance fields.²⁴

SUMMARY

This chapter has investigated three aspects of residential information gathering: (a) the use and effectiveness of various information sources, (b) the selectivity of information sources in terms of vacancy types, and (c) the spatial biases of information sources. The major findings are as follows.

Walking and driving proved to be the most frequently used method of locating vacancies, both for the sample as a whole and for owners and renters as distinct groups. The only observed variation from this finding was the virtually ubiquitous use of newspapers by forced movers. Considered in terms of effectiveness (Impact + Coverage) friends and relatives emerged as the leading information source for the sample as a whole, though for forced movers and owners, newspapers and realtors, respectively, were of greatest effectiveness.

Realtors proved to be the most selective information source as regards type of dwelling information carried, being almost purely weighted towards houses. The only source which showed a bias

²⁴Brown and Moore, op. cit., pp. 7-9.

towards apartment vacancies was walking and driving.

The areal biases of information sources largely follow from their respective dwelling type biases. Thus, walking and driving was the most important way of locating inner city vacancies, realtors were of greatest relative importance in the outer suburbs, while friends and relatives were biased towards satellite center dwellings. Newspapers showed relatively little areal bias. In terms of the distances they led searching households, walking and driving and friends and relatives were most biased.

Chapter VII

THE CHOICE OF A NEW DWELLING

In this chapter, three basic dimensions of the final choice of a new dwelling are investigated. The aspects selected for examination are: (a) the range of dwelling alternatives considered, (b) the specific reasons for choosing the destination dwelling, and (c) the attractions of the chosen dwelling relative to other vacancies inspected. Each of these aspects provides insights relevant to understanding the overall relocation decision-making process.

Facets of each of these issues have been investigated by previous researchers. For example, Rossi has examined the range of alternatives inspected and the relative attractions of the chosen dwelling and rejected alternatives, finding that a little more than two out of every five households considered just one place and that 'costs' were the most frequently cited attraction of the chosen dwelling.¹ Hempel has also investigated the extent of product examination, focussing on the number of dwelling units actually visited, the number of houses visited with the intent of considering for purchase, and the number of houses entered for inspection.² Meanwhile, Pryor has recently investigated reasons for dwelling choices in Melbourne, Australia, and found that 'desirable house/price' and

¹P. H. Rossi, Why Families Move, Glencoe, The Free Press, 1955, pp. 162-169.

²D. J. Hempel, "Search Behavior and Information Utilization in the Home Buying Process," in P. R. McDonald (ed.), Marketing Involvement in Society and the Economy, Chicago, American Marketing Association, 1970, pp. 241-249.

'attractive lot/area' were by far the most important decision variables.³

Rather than concentrating on one particular issue, this chapter examines all three dimensions in an attempt to provide a rounded perspective on the final dwelling choice.

THE RANGE OF DWELLING ALTERNATIVES CONSIDERED

The number of vacancies inspected by searching households is likely to vary considerably according to various household circumstances. A priori it could be expected that the numerical extent of search activities will vary according to the time available for searching and the residential aspirations of the intending migrant households. Aspects of both of these variables are briefly discussed in this section.

Before moving on to these specific analyses, it should be noted that for the sample as a whole, the mean number of dwellings inspected was 7.4. The median number of inspections per household (4.0), however, gives a truer indication of the general extent of search activities as a few households visited a large number of units and thus exert a disproportionate influence on the mean value. The modal number of units inspected was one.

Time Dimensions of Search

The actual time households had available to find new

³R. J. Pryor, "Urban Fringe Residence: Motivation and Satisfaction in Melbourne," The Australian Geographer, Vol. 11, 1969, pp. 148-156.

dwellings was not explicitly ascertained in the survey. However, the length of time spent searching seriously was investigated and may be taken as a surrogate for available time. The expectation was that, by and large, the longer a household spent searching for new housing, the more units it would actually inspect.

Classification of the household responses according to the time spent searching and the number of units inspected convincingly confirmed the hypothesized pattern. Table 21 summarizes these results and indicates that the number of vacancies inspected bore an invariant positive relationship to the amount of time spent searching.

Mover Aspirations and Search

For the purpose of examining the relationship between residential aspirations and the extent of searching, attention was focussed on tenure status, achieved tenure being taken as representing residential aspirations in that direction. The anticipation here was that renters, as a group, would inspect fewer dwellings than owners. In brief, the rationale for this hypothesis is based upon the greater financial and socio-psychological investment generally considered to be associated with home ownership. In other words, in a sub-optimizing-satisficing context,⁴ it is likely that owners will be

⁴Pure optimizing behavior, whereby a household obtains complete information about all alternatives possessing prescribed characteristics (and can rank order them) is unlikely in the context of residential search, given that search is costly. Sub-optimal behavior, whereby the searching household obtains information about a number of alternatives (and can select the 'best' one) is the most that can reasonably be expected. On this point see J. Silk, Search Behavior: General Characterization and Review of Literature in the Behavioral Sciences, Geographical Papers No. 7, Department of Geography, University of Reading, 1971, pp. 8-9.

TABLE 21

AVERAGE NUMBER OF DWELLING INSPECTED,
BY TIME SPENT SEARCHING

Time Spent Searching	Number of Households	Average Number of Dwellings Inspected
Less than 1 Week	84	3.6
1 Week - 1 Month	141	6.5
1 - 3 Months	81	9.3
4 - 6 Months	18	15.3
7 - 12 Months	18	16.0
Totals	342	7.4

Source: Questionnaire Survey, 1972.

desirous of obtaining some form of 'best' dwelling, whereas renters are more likely to settle for the first 'satisfactory' unit they locate.

At the same time, it could perhaps be argued that because owners tend to specify more residential aspirations than renters, there will be relatively fewer apparently suitable vacancies for them to inspect. In other words, the fewer aspirations a household has, the more vacancies there will be which appear to meet the household's requirements. However, in cities the size of Edmonton, the large number of units on the housing market at any one time is likely to undermine this argument.

The postulated owner:renter differential was strongly verified by the empirical data. One-third of all renter households inspected just one dwelling, whereas only one in twenty owners so restricted their search activities. The full extent of the difference between the two segments of the mover population is outlined in

TABLE 22

NUMBER OF VACANCIES INSPECTED, BY DESTINATION TENURE
(NUMBER AND PERCENTAGE OF HOUSEHOLDS)

Vacancies Inspected	Owners	Renters	Totals
1	5	4.5	78 33.6 83 24.3
2	5	4.5	25 10.8 30 8.8
3	9	8.2	22 9.5 31 9.1
4	8	7.3	20 8.6 28 8.2
5	9	8.2	25 10.8 34 9.9
6	9	8.2	14 6.0 23 6.7
7	7	6.4	8 3.4 15 4.4
8	4	3.6	5 2.2 9 2.6
9	6	5.4	4 1.7 10 2.9
10	8	7.3	6 2.6 14 4.1
Over 10	40	36.4	25 10.8 65 19.0
Totals	110	100.0	232 100.0 342 100.0

Source: Questionnaire Survey, 1972.

Table 22. Many renter households emphasized the satisficing nature of their search behavior with comments to the effect that they had found their present dwelling with little difficulty, and as it met most of their requirements, they had decided it was not worth the effort to continue looking for anything better.

REASONS FOR CHOOSING THE DESTINATION DWELLING

The reasons for the dwelling choice eventually made should, to a large extent, follow from the aspirations households set themselves to attain. On the other hand, the frequency distributions of aspirations and final choice criteria might differ somewhat as the final choice may be between several alternatives, all of which meet

the households' important aspirations. This may occur where households purposely confine their searches to sections of the urban area in which all dwellings meet their major specifications. In such cases, factors not registered as primary requirements at the start of the search process may come to serve as final choice variables.

Information on the final decision criteria was elicited by asking respondents to cite (in order of importance) the most important factors in their choice of their present dwelling. The following analyses, like those on residential aspirations, are based upon the factors first mentioned by the households.

Overall, the responses mirrored those earlier outlined for aspirations: that is, the vast majority of households chose their present dwelling on the basis of either site and dwelling, financial, or distance to work considerations. Collectively, these three factors accounted for 83.3 per cent of all the first mentioned reasons. The bottom row of Table 23 summarizes the findings for the total sample and shows that of these three factors, site and dwelling and financial considerations were particularly pertinent decision variables.

However, the aggregate similarity between the distributions of aspirations and final choice criteria should not be taken to mean that virtually all households cited the same elements in both instances. Table 23 shows that this was definitely not the case. The table outlines the first mentioned aspirations and final choice criteria of the sample households, thereby indicating to what degree the households' decision criteria matched their initial residential specifications. Thus, it can be calculated from the table that for almost half of the households, the most important factor in their final decision was

TABLE 23

FIRST MENTIONED RESIDENTIAL ASPIRATIONS AND
FIRST MENTIONED FINAL CHOICE CRITERIA
(NUMBER OF HOUSEHOLDS)

Aspirations	Final Choice Criteria ^a						Totals
	S&D	W	F	G. A.	P.C.	G.L.	
Site and Dwelling Features	74	7	18	1	1	10	3
Close to Work	18	41	13	4	2	-	-
Financial Accessibility	8	8	54	4	-	-	-
Physical Character of Neighbourhood	6	4	4	5	-	2	24
General Location	5	4	6	3	4	1	-
Social Character of Neighbourhood	-	4	4	-	-	6	-
Services and Facilities of Neighbourhood	2	-	2	2	-	-	2
Other	-	-	2	-	-	-	3
Totals	114	68	103	19	7	19	5
							6
							342

^a Abbreviations: S&D - Site and Dwelling; W - Close to Work; F - Financial; G. A. - General Accessibility; P. C. - Physical Character of Neighbourhood; G. L. - General Location; S. C. - Social Character of Neighbourhood; S. F. - Services and Facilities of Neighbourhood.

Source: Questionnaire Survey, 1972.

different from their initial major aspiration.

The tabulated data suggest that financial considerations are the most likely of all factors to carry over from initial aspirations to actual decision criteria. Fully 72.0 per cent of the households who specified financial factors as their principal aspiration also explained their final choice in terms of that variable. The corresponding proportions of households citing site and dwelling, and distance to work factors at both stages of the decision process were 64.3 per cent and 52.6 per cent, respectively.

In the case of the distance to work and general accessibility factors, the data are suggestive of a time-distance frictionless zonation of intra-urban residential location.⁵ As can be gathered from the table, quite large proportions of the households who cited those two factors as aspirations did not mention them as final decision variables. This prompts the speculation that these households may have completely confined their search within some critical time-distance bounded space and, having satisfied their accessibility specifications from the outset, did not consider them to be primate in the actual final dwelling decision. In similar fashion, the low carry-over of physical neighbourhood considerations from aspirations to final choice criteria likely reflects a deliberate confining of search within neighbourhoods considered to be of satisfactory character. Alternatively, however, these findings may, to some extent, reflect a

⁵On this point see A. Getis, "Residential Location and the Journey from Work," Proceedings of the Association of American Geographers, Vol. 1, 1969, pp. 55-59; and J. S. Whitelaw, "Scale and Urban Migrant Behavior," Australian Geographical Studies, Vol. 10, 1972, pp. 101-106.

TABLE 24

FIRST MENTIONED FINAL CHOICE CRITERIA, BY DESTINATION ZONES AND TENURE
(PERCENTAGE OF HOUSEHOLDS)

Choice Criteria	Inner Zone N = 91	Middle Zone N = 122	Outer Zone N = 112	Satellite Centers N = 17	Owners N = 110	Renters N = 232	Totals N = 342
Site and Dwelling Features							
Financial	18.6	30.3	44.6	58.8	45.4	27.6	33.3
Close to Work	22.0	33.5	35.7	17.6	35.5	28.0	30.1
General Location	38.5	21.3	6.2	-	6.4	26.2	19.9
General Accessibility	3.3	6.6	5.4	11.8	6.4	5.2	5.6
Physical Character	13.2	3.3	1.8	-	-	7.8	5.6
of Neighbourhood	1.1	2.5	3.6	-	3.6	1.7	2.0
Social Character	2.2	-	-	11.8	1.8	0.9	1.5
of Neighbourhood	-	-	-	-	-	-	-
Services and Facilities	1.1	2.5	0.9	-	-	0.4	0.3
of Neighbourhood	-	-	1.8	-	0.9	2.2	1.7
Other							
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Questionnaire Survey, 1972.

willingness to 'trade-off' these considerations in favor of other factors.

Table 23 also emphasizes the fact that besides being a constant consideration throughout the decision-making process of many households, financial factors often become the key decision variable for households which did not explicitly rate them of importance at the time they initially formulated their residential aspirations.

In concluding this section, it should be noted that the relative importance of the three principal choice variables was found to vary quite considerably when the sample households were grouped according to destination tenure and location. The principal dimensions of these variations may be summarized as follows: owner and outer zone households clustered solidly on site and dwelling, and financial factors, deeming distance to work considerations relatively unimportant; satellite center households were heavily biased towards site and dwelling factors; closeness to work dictated the largest proportion of inner zone choices; while renters were evenly divided between financial, site and dwelling, and journey-to-work considerations. A complete accounting of these variations can be gauged from Table 24.

THE ATTRACTIONS OF THE CHOSEN DWELLING RELATIVE TO OTHER INSPECTED VACANCIES

Besides probing the specific reasons for choosing a particular dwelling, the questionnaire survey also investigated the attractions of the chosen dwelling relative to the other units inspected, in order to place the final choice in a comparative perspective. This was achieved by asking the respondents to rate various dimensions of

the dwelling they chose as either better, the same, or worse than the other dwellings they inspected. The principal findings of this investigation are briefly discussed in this section. The comments that follow are, of course, limited to the 259 households who inspected more than one dwelling.

The responses of the households are presented in Table 25. Several points emerge from this table. Firstly, as might be expected in a comparative investigation of this nature, more than half of the respondents rated most dimensions of their chosen dwellings as no better or worse than those of the other vacancies they inspected. A second point is that, given this overall pattern of assessment, the chosen dwellings were consistently rated as the best inspected in terms of one factor: namely, costs. All told, 72.2 per cent of the households rated their present dwelling as 'better' on this particular dimension. A majority of the households also rated their chosen dwellings to be the best with respect to state of repair. Finally, the frequency distributions of these data suggest that most households are reluctant to brand any aspects of their chosen residence as worse than those of the other units they inspected and rejected.⁶

The assessment ratings varied somewhat amongst the sub-groups of the sample. Generally speaking, however, these variations were in expected directions. For example, a majority of satellite center locators, no doubt to some degree reflecting the physical structure of their new residential setting, rated their present lot

⁶With respect to this point, it is likely that the 'same' category is somewhat inflated.

TABLE 25
PERCENTAGE OF HOUSEHOLDS RATING FEATURES OF THEIR CHOSEN DWELLING AS 'BETTER', 'THE SAME',
OR 'WORSE' THAN THE OTHER DWELLINGS THEY INSPECTED, BY DESTINATION ZONES AND TENURE^a

Features	Inner Zone N = 55			Middle Zone N = 94			Outer Zone N = 93			Satellite Centers N = 17			Owners N = 105			Renters N = 154			Total N = 259		
	Better	Same	Worse	Better	Same	Worse	Better	Same	Worse	Better	Same	Worse	Better	Same	Worse	Better	Same	Worse			
Costs	74.5	18.2	7.3	70.2	17.0	12.8	70.0	22.5	7.5	88.2	11.8	—	74.2	19.0	6.8	70.7	18.9	10.4	72.2	18.9	8.9
State of Repair	80.0	20.0	—	29.8	20.2	47.3	40.9	11.8	64.7	29.4	5.9	50.4	39.1	10.5	60.3	26.7	13.0	56.3	31.7	12.0	
Number of Rooms	27.3	70.9	1.8	27.7	60.6	11.7	28.0	66.7	5.3	41.2	58.8	—	28.5	63.8	7.7	28.5	65.6	5.9	28.5	64.9	6.6
Size of Rooms	41.8	50.9	7.3	29.8	54.3	15.9	36.6	51.6	11.8	52.9	41.2	5.9	40.9	47.6	11.5	33.9	54.5	12.4	36.2	51.8	12.0
Lot Size	18.2	74.5	7.3	38.3	54.3	7.4	36.6	48.4	15.0	76.5	17.6	5.9	45.7	43.8	10.5	29.2	61.1	9.7	35.9	54.0	10.1
Kind of People in Neighbourhood	18.2	80.0	1.8	21.3	68.1	10.6	19.4	78.5	2.1	41.2	52.9	5.9	20.9	73.3	5.8	21.4	73.4	5.2	21.2	73.3	5.5
Neighbourhood Reputation	12.7	85.5	1.8	25.5	70.2	4.3	24.7	72.1	3.2	52.9	41.2	5.9	30.4	63.8	5.8	20.2	77.9	1.9	24.3	72.3	3.4
Neighbourhood Lay Out	21.8	78.2	—	33.0	60.6	6.4	34.4	59.1	6.5	70.6	23.5	5.9	41.9	50.4	7.7	27.9	68.8	3.3	33.5	61.4	5.1
Neighbourhood Condition	36.4	63.6	—	25.5	64.9	9.6	33.3	60.2	6.5	64.6	23.5	5.9	33.3	57.2	9.5	33.2	62.3	4.5	33.2	60.2	6.6
Shopping	23.6	70.9	5.5	27.7	59.5	12.8	37.6	54.9	7.5	17.6	47.1	35.3	33.3	55.2	10.4	27.3	62.3	10.4	29.7	59.4	10.9
Schools	12.7	87.3	—	19.1	78.7	2.1	40.9	51.6	7.5	35.3	58.8	5.9	41.9	53.3	4.8	16.2	80.5	3.3	26.6	69.5	3.9
Accessibility to Work	45.6	54.5	—	41.5	45.7	12.8	23.7	60.2	16.1	23.5	52.9	23.5	27.6	57.2	15.2	39.6	50.7	9.7	34.7	53.3	12.0
Accessibility to Downtown	32.7	61.8	5.5	27.7	60.6	11.7	20.4	65.6	14.0	23.5	52.9	23.5	25.7	62.8	11.5	25.9	61.7	12.4	25.8	62.2	12.0
Accessibility to Friends and Relatives	10.9	89.1	—	14.9	81.9	3.2	12.9	78.5	8.6	17.7	64.6	17.7	13.3	75.2	11.5	13.6	85.1	1.3	13.5	81.0	5.5
Recreational Areas	27.3	72.7	—	31.9	67.0	1.1	28.0	65.6	6.5	35.3	58.8	5.9	26.6	66.6	6.8	31.8	67.6	0.6	29.7	67.2	3.1

^aData refer to the households which inspected more than one dwelling.

Source: Questionnaire Survey, 1972.

sizes, room sizes, neighbourhood layouts, conditions and reputations (as well as dwelling costs and states of repair) as better than the other places they looked at. Meanwhile, owners generally rated their chosen dwellings more favorably than did renters. More specific details on the magnitude of these and other variations can be determined from the accompanying table.

SUMMARY

The objective of this chapter has been to identify three important dimensions of the final dwelling choice: (a) the range of dwelling alternatives considered, (b) the specific reasons for choosing the destination dwelling, and (c) the attractions of the chosen dwelling relative to other vacancies inspected.

The survey data indicate that most households inspect comparatively few vacancies before making a choice. The number of units inspected bears a positive relationship to the time spent searching while, on the whole, owners tend to consider a wider range of alternatives than renters.

Most dwelling choices are made in terms of site and dwelling, financial, or distance to work criteria. Inspection of the questionnaire responses revealed that almost half of the households cited a primary choice reason different from their initial leading aspiration. In this respect, financial considerations were found to be most likely to carry over from the aspiration to final choice stage.

The relative importance of the choice variables proved to vary amongst sub-groups of the sample. For example, households who relocated at considerable distance from the city center rarely

mentioned journey to work as a choice factor, favoring instead site and dwelling factors. On the other hand, closeness to work dictated the largest single share of inner zone choices.

Costs and state of repair were the only dimensions on which households consistently rated their chosen dwelling as 'better' than the other vacancies they inspected. Finally, as might have been expected, owners tend to rate their chosen dwelling more favorably than renters.

Chapter VIII

HOUSEHOLD SEARCH SPACES

The process of residential search can be conceptualized as consisting of stages of aspiration formulation, information gathering, the evaluation of alternatives, and the final choice of a new dwelling. Aspects of each of these stages have been examined in the preceding chapters. The spatial manifestations of these behaviors are the actual physical patterns of search throughout intra-urban space and it is to these patterns that attention is now turned.

The notion of individuals, groups, or organizations physically searching geographic space in order to locate a specified goal is relevant to many problems studied in human geography besides those relating to migration.¹ For the economic geographer, the locating of industrial activities can be seen in terms of a search among geographic alternatives for some form of 'best' location. The same obviously applies to the problem of commercial location decisions. Meanwhile, for households newly arrived in a city, numerous search activities are necessary to establish a satisfactory pattern of consumer behavior, to find a suitable route to work, to find satisfactory schooling for children, and to find recreational facilities matching

¹For general reviews of the literature on search behavior see P. Gould, Space Searching Procedures in Geography and the Social Sciences, Working Paper No. 1, Social Science Research Institute, University of Hawaii, 1966, 36 pp.; and J. Silk, Search Behavior: General Characterization and Review of Literature in the Behavioral Sciences, Geographical Papers No. 7, Department of Geography, University of Reading, 1971, 32 pp.

their demands. Likewise, households relocating themselves within a city may have to undertake search activities to re-establish socially, psychologically, and economically satisfying patterns of spatial behavior.

In the case of industrial and commercial location decisions, it is surely more realistic and meaningful to investigate the composite sets of utilities and disutilities associated with each of the plant and commercial locations considered than to simply examine in isolation the advantages and disadvantages of the chosen location. Similarly, while it is relatively easy to discern and 'explain' simple habitual response behavior patterns (e.g., journey to work, grocery shopping, etc.), greater understanding of these behaviors would accrue if the trial and error learning (search) procedures which preceded their selection were also examined. By the same reasoning, it is undoubtedly more fruitful in many instances to view migration in a probabilistic framework rather than from a simple dichotomous origin-destination perspective.

A number of studies investigating aspects of these topics have incorporated the notion of search, but such studies are few in number.² A likely reason for the general neglect of spatial

²For example see L. A. Brown and J. Holmes, "Search Behavior in an Intra-Urban Migration Context: A Spatial Perspective," Environment and Planning, Vol. 3, 1971, pp. 307-326; R. G. Golledge and L. A. Brown, "Search, Learning and the Market Decision Process," Geografiska Annaler, Series B, Vol. 47, 1967, pp. 116-124; D. F. Marble and S. R. Bowlby, "Shopping Alternatives and Recurrent Travel Patterns," in F. E. Horton (ed.), Geographic Studies of Urban Transportation and Network Analysis, Evanston, Northwestern University Studies in Geography, No. 16, 1968, pp. 42-75; and J. S. Whitelaw and J. S. Gregson, Search Procedures in the Intra-Urban Migration Process, Monash Publications in Geography, No. 2, 1972, 35 pp.

search procedures would seem to be the difficulty associated with studying these behaviors. To take one aspect of residential mobility as an example, it is operationally far easier to concentrate on the chosen residence than on the potentially quite large set of alternative dwellings inspected by a household.

The reluctance of geographers to isolate the geographic dimensions of search behavior has obviously severely circumscribed our knowledge and understanding of the intra-urban migration process. In addition, it seems to have meant the unqualified acceptance of at least one widely promulgated theoretical proposition regarding migrant search spaces to which a number of objections can be raised: namely the supposedly totally dependent relationship of household search spaces to awareness spaces.

In an investigation of this magnitude and range, it is obviously only possible to examine selected aspects of intra-urban search spaces. In view of this limitation, attention is focussed on three general questions, each of which is considered by the author to hold considerable relevance for the formulation of a geographic theory of intra-urban migration. The first section deals with the general question of household search spaces and areal knowledge. The following section examines some of the considerations involved in the formation of household search spaces. Then, in the final section, the distance, directional, and sectoral components of migrant search spaces are analyzed.

SEARCH AND AREAL KNOWLEDGE

The Relationship of Search Spaces to Awareness Spaces

One of the widest held notions about household search behavior is that search activities are confined within a household's awareness space: that is, the set of locations within the urban area about which the migrant household possesses some knowledge before search begins.³ A sampling of the limited literature on migration search spaces discloses the following statements:

The mental map confines the search to the known area of the city.⁴

A basic component of the household's utilization of available information is its search space. This is contained within its awareness space . . .⁵

The actual search for vacancies is undertaken within the framework of the household's search space. The search space is contained within its awareness space.⁶

The individual searching for a home site will by definition, only visit locations within his awareness space.⁷

Despite the general acceptance of such a relationship,

³L. A. Brown and E. G. Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, Series B, Vol. 52, 1970, pp. 7-8.

⁴J. S. Adams, "Directional Bias in Intra-Urban Migration," Economic Geography, Vol. 45, 1969, p. 312.

⁵Brown and Moore, op. cit., p. 8.

⁶Brown and Holmes, op. cit., p. 308.

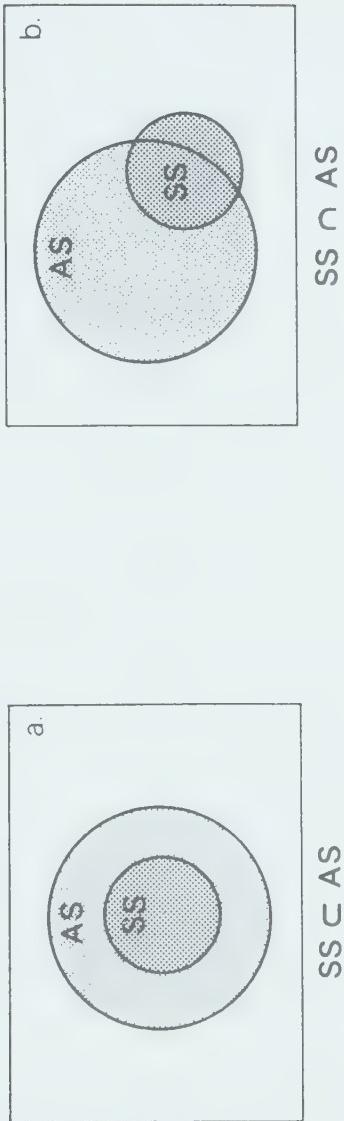
⁷Whitelaw and Gregson, op. cit., p. 3.

empirical verification of the notion is still essentially lacking.⁸ However, the apparent willingness of geographers to accept the relationship is perhaps not surprising. The relationship, as stated by the authors cited above, holds considerable appeal in terms of conceptual neatness. Viewed in set theoretic terms, the relationship postulates the neat case of Figure 8a. If the situation portrayed in Figure 8a does indeed prove to hold true, the productive power of our migration models will be greatly enhanced. On the other hand, Figure 8b illustrates a situation in which search space (SS) and awareness space (AS) only intersect, leaving some portion of SS unexplained by AS. The accepted relationship also has the attraction of apparent intuitive logic. Thus, in many respects, it seems quite reasonable to suppose that people will prefer to look for alternative accommodation in known areas of a city in order to reduce the degree of perceived uncertainty associated with the residential relocation decision.

Yet in spite of the attractiveness of the promulgated relationship, it is not difficult to envisage circumstances in which the search for a new dwelling may take a household into areas of the city about which it has no knowledge. Consider first of all the case of recent migrants to a city who intend to relocate elsewhere in the urban area. By sheer virtue of their limited period of residency they will

⁸To the author's knowledge, Silk alone admits to the possibility of extra-awareness space search. "Given our present state of knowledge it is not at all clear whether particular areas are defined by the searcher in a fairly rigid manner . . . or whether a "sound" procedure . . . is adopted and a considerable amount of exploration of unknown territory carried out." J. Silk, "Search Behavior and the Residential Location Decision," Paper submitted to the I. B. G. Population Study Group's Symposium on Quantitative Techniques in Population Geography, University of Liverpool, 22-24 September, 1971, p. 4.

ALTERNATIVE SEARCH SPACE:
AWARENESS SPACE RELATIONSHIPS



SS = Search space AS = Awareness space

Figure 8

have accumulated limited spatial knowledge of the city. Most households in such situations might well be expected to search in some areas with which they have had no previous direct or indirect experience. Another situation which could quite conceivably direct search behavior outside the bounds of awareness space would be the case of forced movements. The exigencies surrounding moves of this nature may not allow the households concerned the luxury of confining their search to areas with which they are familiar. Consider, too, the situation where a household is actively looking for alternative accommodation. Suppose the household sees an advertisement in the local newspaper about a dwelling which appears to meet most of the residential criteria but which is located in an area of which the household has no knowledge. It would seem reasonable to expect that many households faced with this type of situation would consider a visit to the dwelling in question to be worthwhile.

What conclusions can be drawn from the preceding discussion? In the author's opinion, a simple SS:AS relationship of the type proposed by previous researchers is unlikely. Rather, it is more probable that quite a sizeable proportion of migrating households will undertake at least one foray outside their awareness spaces, thus giving an $SS \cap AS$ relationship.

Before testing this proposition, comment is called for on what is meant by "no knowledge." While a threshold set at zero would seem to be a logical mark, it would exclude areas which households know by name but about which, for all intents and purposes, they have no other knowledge. Several other problems might be seen as surrounding the operationalization of the concept. In relation to

newcomers to a city, it might be argued that those who come from other cities, while having little or no knowledge of their new city, will nonetheless have an awareness of the spatial structure of urban centers in general. Obviously such transferral of knowledge does occur, but it is suggested that this does not necessarily terminate the "no knowledge" state. For instance, previous urban experience may lead a household to expect to find lower density housing on the city's periphery, but it will provide little beyond that and, thus, a recently arrived household looking for housing in the outer suburbs will, in all other respects, be moving into unknown territory.

It might also be argued that the reading of a newspaper advertisement for a dwelling in an area of which the household has no knowledge signals the end of the "no knowledge" condition regarding that area.⁹ Strictly speaking, this is perhaps true in the sense that the household has learned something about one dwelling in the area and can generalize some aspects of the dwelling information to the area as a whole. However, this type of reasoning holds little operational utility for researchers. In essence, it virtually makes the notion of search in unknown territory an impossibility and, by implication, renders the concept of awareness space superfluous in terms of understanding migration search behavior.

In the present study, the determination of the existence of prior knowledge, or the lack of it, was left to the individual respondents. This approach obviously allows some latitude for households

⁹A somewhat similar situation would be where a realtor informs a client of a dwelling worth inspecting in an area with which the client is unfamiliar.

to interpret what is meant by "no knowledge," but at the same time it can be argued that it is the household's perception of knowledge that is most relevant.¹⁰

Examination of the survey data revealed no sign of an invariant SS \subset AS relationship. One hundred and five of the 342 surveyed households reported that, on at least one occasion, they visited a dwelling in an area about which they had no prior knowledge. Given the complexities of human behavior, a figure of 5-10 per cent would detract little from the widely accepted SS \subset AS relationship. However, the fact that three out of every ten households displayed 'deviant' behavior must cast some doubt on the generality of the traditional model.

The ratio of dwellings inspected in known areas to those in unknown areas was 3.85:1.¹¹ However, this should not be taken as representing a close approximation to the SS \subset AS model. While the frequency per household of extra-AS search is of general interest, the basic issue as regards the postulated SS \cap AS relationship is simply whether or not a household, at any one time, ventured into unknown territory.

Also of relevance to the overall question of an SS : AS

¹⁰Future studies might find it worthwhile to approach this issue in terms of "degrees of knowledge."

¹¹This ratio is based on the 310 respondents who were able to recall the locations of the dwellings they inspected, the number of inspected units in unknown areas, and the information channels which led them to specific dwellings. A ratio of about this magnitude was expected for, although it is likely that a considerable proportion of movers will look beyond their awareness spaces, it is unlikely that many households will concentrate their searching in such areas.

relationship is the problem of determining whether households which only searched within the bounds of their awareness spaces did not search unknown areas specifically for the reason that they were unfamiliar. This is a patently difficult question to resolve. For example, a household may confine its search within the general area of its origin location, but this does not, of itself, permit the conclusion that the household did not search in unknown area X simply because it was unknown. Similarly, a household which only looked in known areas and chose a dwelling on the basis of very few inspections may not have expressly excluded unknown areas from consideration for lack of knowledge or any other reason. On the other hand, in some cases the complete absence of search activities from unknown areas will reflect deliberate exclusionary strategies on the part of the households concerned.

An attempt was made to shed some light on these questions. Firstly, the 237 households which confined their search to known areas of the urban area were asked whether the fact they knew nothing about some areas put them off looking for suitable dwellings in those areas. Of this total, only 23 households answered in the affirmative. The overwhelming magnitude of this consensus warrants some scepticism when viewed alongside the households' actual search spaces. Nonetheless, the response pattern can be taken as further evidence that previous knowledge is not of exclusive importance in determining migrant household search spaces.

In addition, all households were posed with the hypothetical situation that they were looking for an alternative residence and had seen an advertisement in the paper which appeared to meet

their residential aspirations. The respondents were asked whether they would go to inspect the dwelling if: (a) they had a favorable opinion of the area, (b) they had an unfavorable opinion of the area, (c) they had no knowledge or opinion about the area. Not unexpectedly, 95.9 per cent reported affirmatively in the case of (a) and 86.5 per cent negatively in the case of (b). Of most interest to the present investigation, though, was the finding that fully 88.0 per cent of the respondents said they would inspect such a dwelling in an unknown area.

Obviously all these findings should be considered alongside the previously noted problem of defining a state of "no knowledge," and the additional likelihood that some household responses were post-migration rationalizations. However, these problems aside, the data taken as a whole offer good reason to believe that awareness space does not impose the strict limitations upon search behavior which previous writers have claimed. Further empirical studies are thus called for.

Selectivity of Search in Unknown Areas

The fact that a considerable proportion of migrant households go beyond their awareness spaces in search of alternative accommodation leads on to the question of whether such search behavior is selective of certain segments of the mover population. In the introductory remarks of the preceding section, it was suggested that recent in-migrants to a city and forced movers might display a greater than average propensity for this type of search. An owner-renter differential is also another possibility. The considerable

investment involved in home ownership might well be expected to lead a household to consider it worthwhile to make at least a cursory inspection of the available housing in some unknown areas. Alternatively, though, the magnitude of the investment may serve to discourage aspiring owners from looking in such 'risky' areas. The survey data were examined on each of these dimensions: forced moves, tenure status, and length of residence in Edmonton.

As noted in Chapter IV, only 25 of the 342 households were classified as forced moves. Thirteen of these households (52.0 per cent) reported that they had looked at dwellings in previously unknown areas, compared with 29.0 per cent of the voluntary movers. The small number of forced moves demands caution in interpreting findings relating to that group, but even so, it seems reasonable to suggest tentatively that forced movers are indeed more likely to look beyond the confines of awareness space than are voluntary movers.

Likewise, owners were found to display a greater propensity for searching outside known sections of the city than renters. Of all the households which purchased their destination dwelling, 43.6 per cent were found to have inspected dwellings in unknown areas. The corresponding figure for renters was only 24.6 per cent.

The expectation that short-term residents would be more likely to look outside known areas was not substantiated (Table 26). The only support for the notion was given by households resident in Edmonton for less than a year prior to moving, but the small number of households in that category limits the confidence one can place in those figures. Households of 1-4 years residence displayed a marked tendency to avoid unfamiliar areas, while longer term

TABLE 26

YEARS OF RESIDENCE IN EDMONTON^a
AND SEARCH IN UNKNOWN AREAS
(NUMBER OF HOUSEHOLDS)

	Years of Residence						Totals
	1	1-4	5-9	10-19	20-39	40	
All Households	18	102	71	61	78	12	342
Households which Searched Unknown Areas	7	26	23	19	29	1	105

^aYears of residence refers to the longest period of residence in Edmonton by a member of a household (i. e. head of household or spouse).

Source: Questionnaire Survey, 1972.

residents (20-39 years residence) showed exactly the opposite inclination. The conclusion drawn from these findings is that a simple "years of residence" index masks important intervening variables and, thus, is of little explanatory value. For example, subsequent examination of the survey data revealed that 43.6 per cent of the long-term households (20-39 years) bought their destination dwelling, whereas only 23.5 per cent of the 1-4 year households were purchasers.

Information Sources and Search in Unknown Areas

Having established that a considerable proportion of mover households do look in previously unknown areas and that some sections of the population are more inclined to do so than others, there remains the question of ascertaining the relative importance of the various information sources in promoting this type of spatial

search.¹²

This thesis has portrayed residential relocation as an instance of decision making under uncertainty, in that mover households are unable to attach generally accepted probabilities to the outcomes of an action. The degree of uncertainty is obviously magnified in the case of research in unknown areas, particularly as regards evaluating the situational utility of a dwelling. In the discussion of information flows, it was noted that the use a household makes of a particular information source largely depends on the household's perception of the source's credibility. Credibility was, in turn, noted to be a function of trustworthiness and expertise. Assuming that households wish to reduce uncertainty as much as possible, it is likely, therefore, that certain information sources more than others will lead searching households to previously unknown areas.

From the point of view of obtaining trustworthy information about unknown areas, friends and relatives would ideally be the best information source. However, the joint spatio-temporal experiences and knowledge of a household and its friends and relatives reduce the likelihood that such persons will have information on dwellings in areas previously unknown to the household. Perceptions of trustworthiness are also likely to condition the use made of realtor services. Being a marketer source of information, realtors will be seen by many households as manipulators rather than pure informants. The ascription of such motives to realtors, whether correct or

¹²Some of the following remarks inevitably reiterate points made in Chapter VI, as the points are common to search in general and to the special case of search in unknown areas.

incorrect, may not matter too much in the case of dwellings in known areas, as a household can balance realtor claims with personal knowledge; but in the case of unknown areas, that is not possible. Thus, in spite of possessing considerable expertise, realtors are unlikely to play a major role in promoting extra-AS search behavior. Newspapers are also marketer dominated sources, but are generally more trusted than direct dealings with realtors. Two important advantages of metropolitan newspapers are that they provide a large city-wide range of information and that this information can, within certain limitations, be evaluated at the household's own leisure. Intuitively, one would expect walking and driving to lead many searchers into unknown areas. As a consumer source, it largely avoids the pressures and uncertainties of marketer dominated channels. Furthermore, from a purely spatial search perspective, it is easy to conceive of households out driving and 'straying' into unknown parts of the city.

The search data obtained in the questionnaire survey basically confirm these expectations (Table 27). Measured in terms of the number of households which were directed into unknown areas by each source, newspapers emerge as the leading channel, followed by walking and driving. Indices based on the percentage of inspected dwellings in unknown areas found by each source and the percentage importance of each source relative to the universe of inspected dwellings reinforce the primacy of newspaper information. However, from the point of view of search productivity, walking and driving is the leading channel.¹³ This probably reflects the fact that a single

¹³Productivity is defined as the average number of units found by the households using a particular source.

TABLE 27

SEARCH IN UNKNOWN AREAS AND INFORMATION SOURCES

	Newspaper	Real Estate Agents	Walking and Driving	Friends and Relatives	Other	Totals
Number of Households Directed into Unknown Areas by Source	45	17	37	13	3	115 ^a
Number of Inspected Dwellings in Unknown Areas Found by Source	127	66	158	35	3	389
Index of Importance ^b	106	93	101	92	-	

^a105 households searched in unknown areas. In the case of ten households, two information sources led them into such areas.

^bIndex of Importance = (% of inspected dwelling units in unknown areas found by source ÷ % of all inspected dwelling units found by source) × 100.

Source: Questionnaire Survey, 1972.

walking-driving type expedition can unveil several vacancies for inspection, whereas any one newspaper-inspired search is probably more likely to have a single target. Realtor-inspired searches are also likely to be multiple targeted.

FORMATION OF SEARCH SPACES

In the preceding section, the relationship between household awareness spaces and search behavior was analyzed and, as will be remembered, the principal finding was the rejection of the popular supposition that spatial search is completely confined within awareness spaces. The present section continues the examination of household search spaces, looking now at some of the areal limitations households place upon their search activities.

While some households no doubt keep a completely open mind as to where they will search for dwellings, one would intuitively expect the conscious elimination of certain parts of the city from consideration before search actually begins to be a more common procedure. Brown and Moore suggest that criteria such as accessibility or social environment will lead to selectivity of this nature, but to date empirical elucidation of this facet of search behavior has been neglected.¹⁴ The present section tests for the tendency of households to exclude certain areas of their awareness spaces from consideration and the major criteria upon which any exclusions are based.

¹⁴ Brown and Moore, op. cit., pp. 8-9.

Extent of Exclusionary Behavior

The survey data indicate the pre-search elimination of certain areas is indeed the general rule. Slightly more than two-thirds of the mover households reported that they had undertaken this type of delimiting procedure to one degree or another. The propensity for pre-search areal selectivity appears to vary quite significantly amongst the various sub-groups of the mover population. From the standpoint of destination tenure, owner households were more prone to preclude areas from search consideration than were renters (Table 28). The relative permanency and large financial outlay associated with home ownership, as compared with renting, make it likely that intending owners will more readily cast aside areas which they perceive as being potentially very risky. Conversely, renters place less social and economic investment in a dwelling and the surrounding area and are, therefore, not as likely to be as strongly motivated as owners by perception of risk.

Partial explanation of this differential is also likely offered by the aspiration sets of the two groups. It was found, in an earlier chapter, that owner households specified an average of 4.1 aspirations, whereas the average for renters was 3.5. Given this difference, it seems reasonable to suggest that the larger the number of aspirations a household has, the greater will be the number of areas the household perceives as offering little or no probability of success.

Considered spatially, households which relocated in the outer suburbs and satellite centers were most inclined to eliminate particular areas, while inner city locators were least prone to do so

TABLE 28

NUMBER AND PERCENTAGE OF HOUSEHOLDS EXCLUDING
KNOWN AREAS FROM SEARCH CONSIDERATION,
BY DESTINATION ZONES AND TENURE

	Number	Percentage
Destination Zone		
Inner	51	56.0
Middle	85	69.7
Outer	84	75.0
Satellites	13	76.5
Destination Tenure		
Owners	82	74.5
Renters	151	65.1
Totals	233	68.1

Source: Questionnaire Survey, 1972.

(Table 28). To a large degree, these zonal differentials follow logically from the owner-renter patterns discussed above.

The Criteria for Elimination

For the mover population as a whole, considerations of distance to workplace are of principal importance in the elimination procedure (Table 29). Most households view distance in both geographic and time-cost terms. The barrier to north-south communications imposed by the North Saskatchewan River is particularly important as regards the functional interpretation of distance. Many movers automatically exclude one side of the city from search consideration simply because household members are employed on the other side of the river. On this point, perceived difficulties associated with cross-river travel during the winter months were found to

be of particular importance.

The second most important factor leading to the elimination of certain areas consists of sundry other considerations of accessibility to downtown, shopping, schools, public transportation, recreational areas, and various other urban facilities. For quite a large proportion of mover households, negative perceptions of the physical and social quality of neighbourhoods also serve to discourage search.

When migrant households are stratified according to destination location, several variations become apparent (Table 29). Although the factor most common to movers throughout all parts of the city is the journey to work, its strength varies considerably from group to group. The earlier discussion of residential aspirations revealed the journey to work is most often considered of primate importance by inner city relocators. Assuming some measure of intendedly rational behavior on the part of the mover households, the pre-search elimination of areas from consideration should bear some relationship to household aspiration sets. Therefore, it was not surprising to find that the tabulated data indicate central city households also place greater emphasis on the journey to work as a delimiting criterion than do middle and outer suburban and satellite residents (Table 29).

Besides the journey to work factor, inner zone locators show the strongest concern for accessibility considerations in general. In fact, examination of the variables in Table 29 discloses a distinct "narrowness of mind" by these households in the sense that the two accessibility factors completely dominate their elimination decisions.

TABLE 29

REASONS FOR EXCLUDING KNOWN AREAS FROM SEARCH
CONSIDERATION, BY DESTINATION ZONES AND TENURE
(PERCENTAGE OF HOUSEHOLDS CITING EACH REASON)^a

Reasons	Inner Zone N = 51	Middle Zone N = 85	Outer Zone N = 84	Satellite Centers N = 13	Owners N = 82	Renters N = 151	Totals N = 233
Distance to Work	43.1	37.6	33.3	23.1	20.7	45.0	36.5
General Accessibility	45.1	21.2	11.9	15.4	13.4	27.8	22.7
Physical Character of Neighbourhood	7.8	17.6	22.6	38.5	23.2	15.9	18.5
Social Character of Neighbourhood	5.9	18.8	15.5	15.4	14.6	14.6	14.6
Financial Factors	2.0	12.9	16.7	15.4	19.5	7.9	12.0
Noise/Air Pollution	3.9	8.2	11.9	15.4	15.9	5.3	9.0
Determined to Stay in Same Area	15.7	10.6	7.1	7.7	7.3	11.9	10.3
General Dislike	5.9	8.2	11.9	30.8	19.5	5.3	10.3
Other	3.9	2.4	4.8	15.4	6.1	3.3	4.3

^aPercentages sum to more than 100 as some households cited more than one reason.

Source: Questionnaire Survey, 1972.

These findings thus support the general notion that inner city residents espouse a life style in which accessibility considerations hold an important place.

Apart from the substantial importance of the journey to work factor, accessibility considerations are relatively less important to other mover households. In turn, concern for the physical character of neighbourhoods takes on a more important role in guiding search behavior.

The bases of the zonal differences largely lie in the differing proportions of owners and renters in the various zonal migration streams. Making recourse once again to the notion of the financial and social investment involved in home ownership, it could be expected that, while journey to work considerations will no doubt be of some importance to owners, their concerns will probably extend to several other factors. Physically run-down and socially undesirable neighbourhoods are likely to be excluded, as are areas thought to be excessively beyond the financial means of the households. On the other hand, renting involves less of a commitment to an area and convenience factors are more likely to predominate.

The survey data generally support these expectations (Table 29). The anticipated clustering of renters on journey to work and other accessibility factors is verified. Meanwhile, for owners, the physical quality of areas emerges as the leading criterion upon which sections of the city are eliminated, followed closely by journey to work and financial considerations. Somewhat surprisingly, the data indicate the social environment to be of little real importance in the delimitation of search spaces, although it is possible that some

owner respondents considered poor social conditions to be an invariant correlate of physical blight and therefore did not mention them specifically.

SPATIAL BIASES OF SEARCH SPACES

The analyses presented in Chapter III revealed that residential flows within the Edmonton urban area exhibit various spatial biases. Following from this, one could therefore expect migrant household search spaces to display generally similar biases. Preliminary investigations of this notion have been undertaken by Brown and Holmes¹⁵ and Whitelaw and Gregson.¹⁶ These two studies discerned signs of distance, directional, and sectoral biases but, as both authors emphasize, more studies are needed before confident statements can be made about the spatial dimensions of search spaces. An obviously related, but thus far neglected, question concerns the degree of spatial correspondence between completed migrations and the distribution of search nodes:¹⁷ that is, do origin-destination movements closely reflect search space biases? The present section examines both of these questions.

¹⁵ Brown and Holmes, op. cit.

¹⁶ Whitelaw and Gregson, op. cit.

¹⁷ This section makes use of the terminology employed by Brown and Holmes, op. cit., and Whitelaw and Gregson, op. cit., in their investigations of search spaces. The principal terms are defined as follows: Origin node (the origin residence); Destination or Relocation node (the chosen dwelling); Search node (any inspected dwelling); Orientation node (the Peak Value Intersection). The measures of search space bias are the same as those used to measure migration biases in Chapter III.

Distance Bias of Search Spaces

The distance distribution of search nodes was found to follow a definite distance decay pattern. For the mover sample as a whole, one half of all search nodes were within two miles of the households' origin dwellings (Table 30 and Figure 9a). The mean distance travelled to inspected dwellings was 2.5 miles. This marked bias is accordant with several of the study's earlier findings. As noted above, the analyses in Chapter III revealed completed migrations to have a pronounced distance bias. Also leading one to expect a distance bias in search activities was the finding in Chapter IV that the majority of households moved because of dwelling specific rather than neighbourhood specific considerations. In a similar vein, many of the households which expressed a desire to find a dwelling in one particular area of the city had their existing neighbourhood in mind.

Origin Zone. As could be expected, the zonal pattern of search distance bias was of the same relative order as that discerned for completed migrations in Chapter III: the search spaces of households originating in the inner city were most severely circumscribed; those of middle zone households, quite a deal less so; and those of the outer suburban residents, least of all (Table 30 and Figure 9a). The mean distances travelled to search locations by households originating in the three zones were 3.2 miles, 2.6 miles, and 1.7 miles, respectively, the differences largely reflecting the previously discussed areal variations in the city's dwelling opportunity density surface.

Destination Tenure. Many of the preceding analyses

TABLE 30

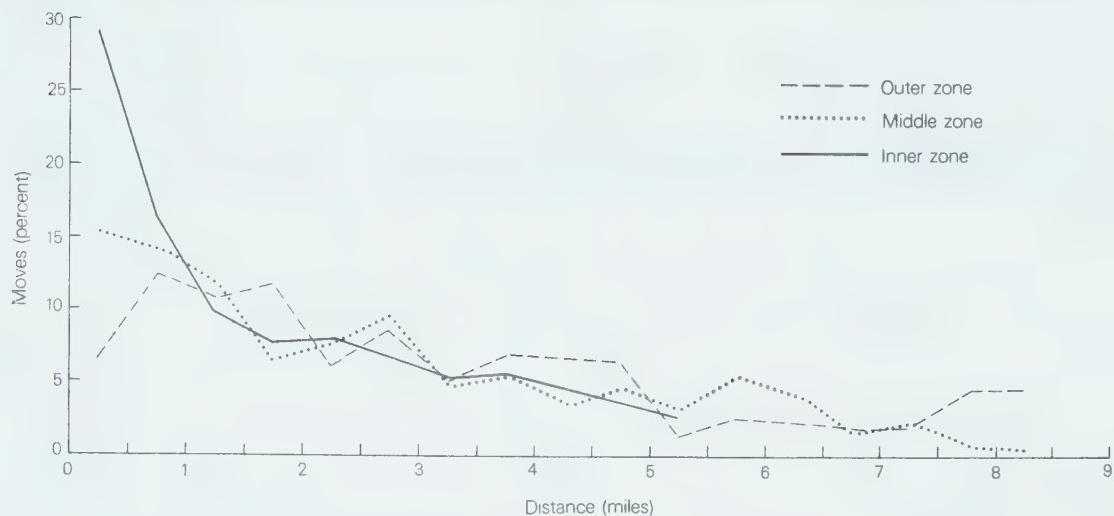
DISTANCES OF SEARCH NODES FROM ORIGIN NODES,
BY ORIGIN ZONES AND DESTINATION TENURE^a
(PERCENTAGE OF SEARCH NODES)

Distances (Miles)	Inner Zone			Middle Zone	Outer Zone	Owners	Renters	Totals
	N = 472	N = 795	N = 463	N = 801	N = 929	N = 929	N = 1,730	
Less than 0.5								
0.5 - 0.9	29.0	15.2	6.7	8.9	23.5	16.7		
1.0 - 1.4	16.3	14.1	12.3	13.0	15.3	14.2		
1.5 - 1.9	10.0	11.9	10.8	8.0	13.8	11.1		
2.0 - 2.4	7.8	6.2	11.7	9.6	6.8	8.1		
2.5 - 2.9	8.0	7.6	6.1	7.7	6.9	7.3		
3.0 - 3.4	7.0	9.4	8.4	7.5	9.4	8.5		
3.5 - 3.9	5.3	4.8	5.2	4.9	5.2	5.0		
4.0 - 4.4	5.5	5.5	6.9	5.4	6.3	5.9		
4.5 - 4.9	4.7	3.8	6.7	5.8	4.0	4.8		
5.0 - 5.4	3.6	4.4	6.3	6.5	3.1	4.7		
5.5 - 5.9	2.8	3.0	1.5	3.1	2.0	2.5		
6.0 - 6.4	-	5.4	2.6	4.1	2.4	3.2		
6.5 - 6.9	-	4.2	2.2	4.6	0.6	2.5		
7.0 - 7.4	-	1.5	1.7	1.6	0.7	1.2		
7.5 - 7.9	-	2.1	1.9	3.2	-	1.5		
8.0 and over	-	0.6	4.5	3.2	-	1.5		
	-	0.3	4.5	2.9	-	1.3		
Totals					100.0	100.0	100.0	100.0

^aSearch nodes in satellite centers excluded.

Source: Questionnaire Survey, 1972.

DISTANCES of SEARCH NODES from ORIGIN NODES by ORIGIN ZONES



Source: Questionnaire Survey, 1972.

Figure 9.a

DISTANCES of SEARCH and RELOCATION NODES from ORIGIN NODES by ORIGIN ZONES

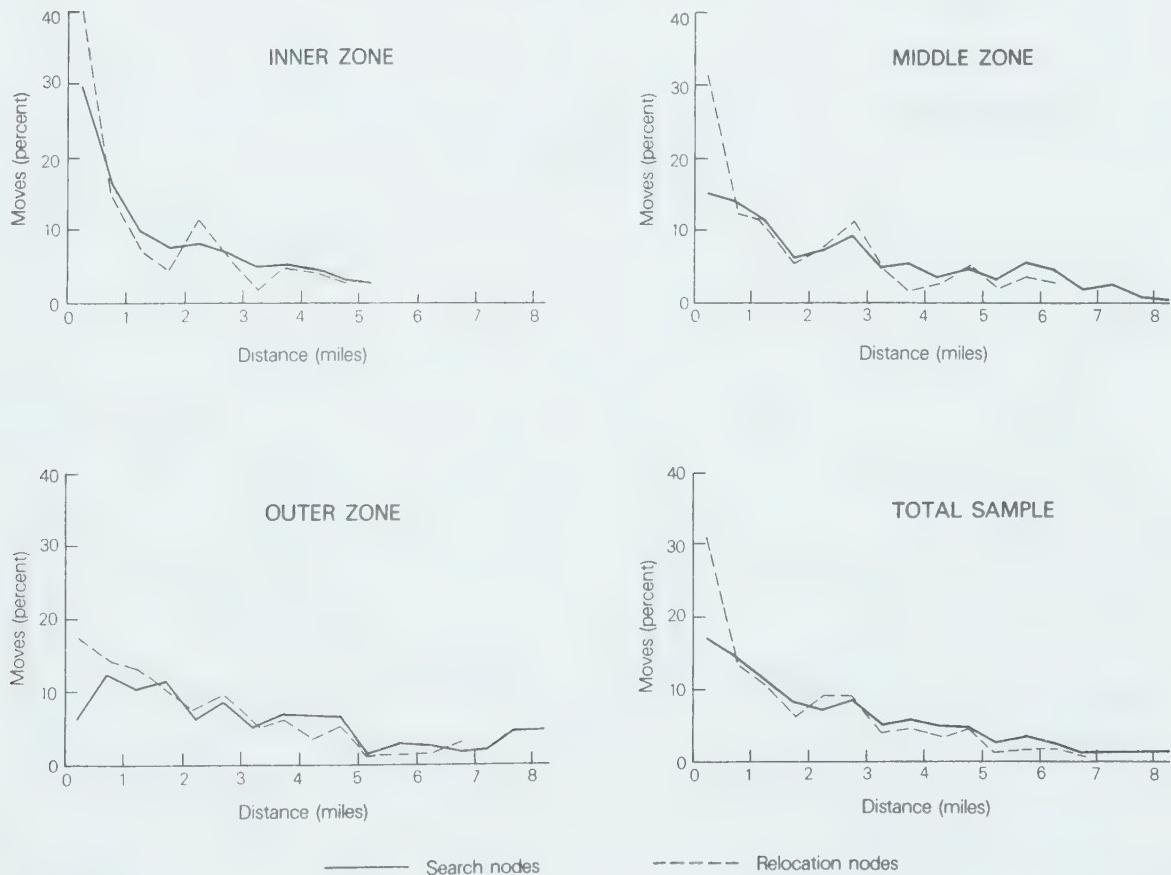


Figure 9. b

Source: Questionnaire Survey, 1972.

DISTANCES of SEARCH NODES from ORIGIN NODES by DESTINATION TENURE

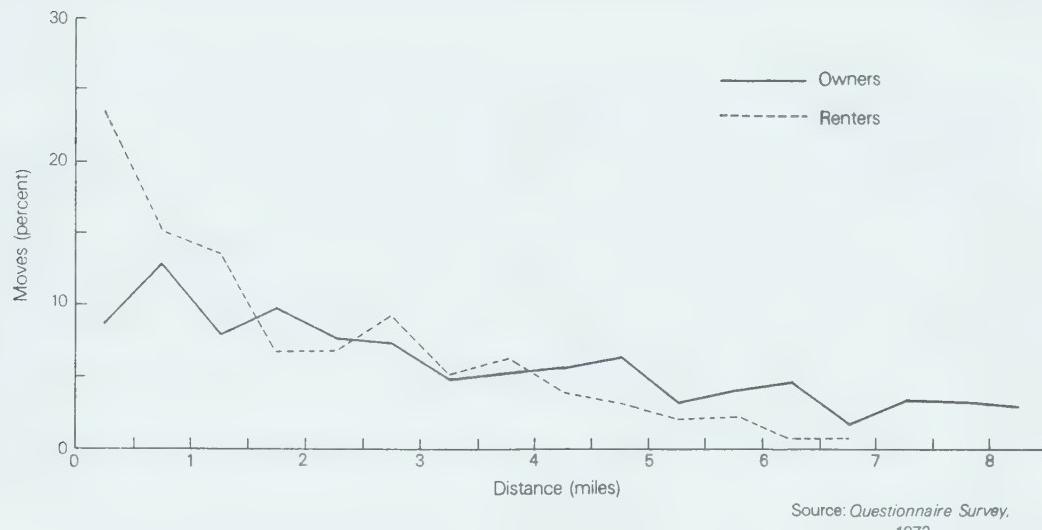


Figure 10. a

DISTANCES of SEARCH and RELOCATION NODES from ORIGIN NODES by DESTINATION TENURE

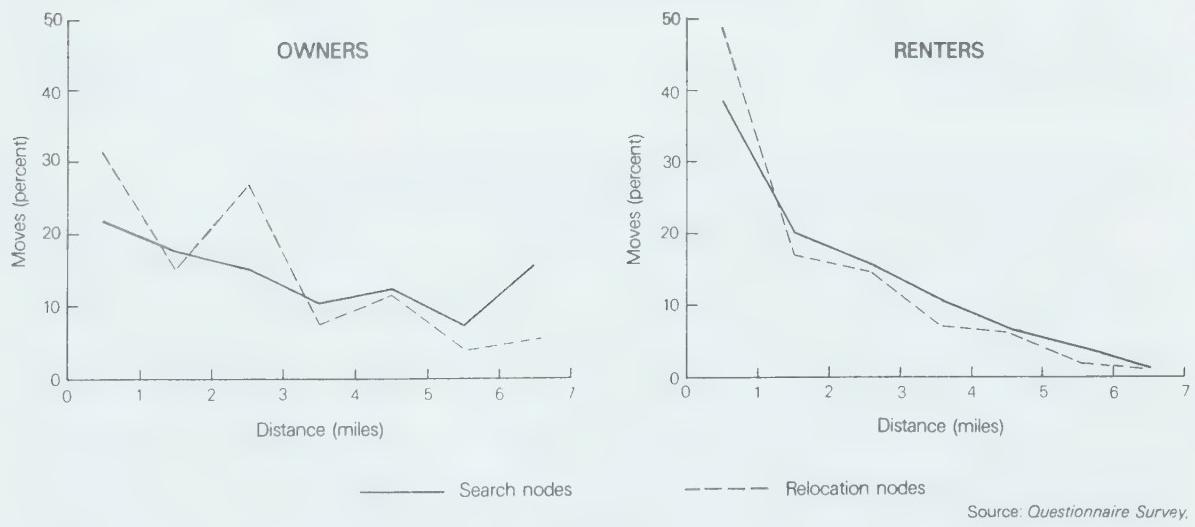


Figure 10. b

have drawn distinctions between the search behavior of owner and renter households. These findings have been largely viewed in terms of the notion that the greater investment involved in home ownership, as compared with renting, accounts for many observed differences between the two groups. This viewpoint is now extended to the issue of search spaces.

With respect to the distance component of search behavior, it is proposed that owner households, recognizing the important implications of the residential purchase decision, will be prepared to range further afield than renters in the search for alternative accommodation. This is also likely to follow from the larger aspiration sets of owners.

Examination of the search networks of owners and renters yielded support for this proposition. Table 30 indicates that almost 40 per cent of the search nodes of renters were within one mile of their origin locations. On the other hand, little more than one-fifth of the dwellings inspected by owners were within this range.

Search and Relocation Space Distance Biases: Comparisons.

The finding that migration search spaces are distance-biased, raises the question of how closely do actual migration flows mirror the search networks from which they are drawn. A pure isometric relationship is unlikely simply for the reason that the 'weightings' of households often vary between search and relocation distributions. In a relocation distribution, each mover household is, of course, represented once only, but in the corresponding search distribution, many households are represented several times and at

several places in the distribution.

This effect aside, it is postulated that a comparison of the distance dimension of relocation and search spaces will reveal the former to be more biased than the distribution of search nodes. To elaborate briefly, it has been shown that households concentrate their search activities in areas relatively close to their origin locations. At the same time, though, Table 30 indicates that households are prepared to range further afield in their search activities if the occasion arises. However, all other things being equal, it is suggested in the light of the various considerations previously noted that, faced with choosing between dwellings at noticeably different distances, a household will generally choose the dwelling closest to its origin location.

The survey data support this contention. Figure 9b clearly shows that the distribution of relocation distances is considerably more biased than the search distribution. In fact, the magnitude of the differential is striking. Whereas 16.7 per cent of all search locations were located within half a mile of household origin locations, the corresponding figure for relocation nodes was 30.6 per cent. From an absolute point of view, inner origin household relocations were most biased, 40.4 per cent falling within the 0-0.5 mile class, compared with 29.0 per cent of the group's search locations. However, in terms of the differential bias between search and relocation distances, the other zonal groups were pre-eminent. In the case of outer zone origin households, only 6.7 per cent of the search nodes were within a half-mile range, but fully 17.1 per cent of these households managed to relocate within that distance of their former

residence. Similarly, while only 15.2 per cent of the dwelling units inspected by middle zone households were within the 0-0.5 mile category, 31.5 per cent of the relocations were so located. Analogous tendencies were found with respect to both renters and owners (Figure 10b).

Sectoral Bias of Search Spaces

Besides a marked distance bias, household search spaces were also found to exhibit distinct sectoral biases (Table 31 and Figures 11-12). Given the findings of Chapter III and the explanations there advanced, this pattern was also to be expected. Using the percentage of search nodes making sector angles of less than thirty degrees as an index of sectorality, the strength of the sectoral bias in search behavior is strikingly heavy, 53.0 per cent of all search nodes falling within this category.

Origin Zones. The zonal pattern of sectorality, however, proved to be different from that anticipated. To briefly recap, in the earlier analyses of migration sectorality, outer zone households were found to be most biased and inner zone movers least so. Accordingly, a similar pattern can be expected in the case of household search spaces. But, as Table 31 indicates, exactly the reverse was found to apply. Outer zone households certainly displayed a marked sectoral tendency in their search activities, as 48.6 per cent of their inspected dwellings fell within the 0-29 degree category, but the comparable figure was even greater for inner city movers (59.9 per cent). In retrospect, this differential could have perhaps been foreseen as it likely reflects, to a large degree, the lower opportunity

TABLE 31

SECTOR ANGLES OF SEARCH NODES, BY ORIGIN ZONES AND DESTINATION TENURE^a
(PERCENTAGE OF SEARCH NODES)

Sector Angles (Degrees)	Inner Zone N = 472	Middle Zone N = 795	Outer Zone N = 463	Owners N = 801	Renters N = 929	Totals N = 1,730
Less than 30	59.9	51.6	48.6	50.3	55.4	53.1
30 - 59	19.3	8.2	20.1	12.3	16.3	14.4
60 - 89	4.9	14.3	9.3	11.1	9.8	10.4
90 - 119	4.2	7.3	6.5	6.6	5.9	6.2
120 - 149	5.3	11.1	7.3	11.6	5.8	8.5
150 and over	6.4	7.5	8.2	8.1	6.8	7.4
 Totals	 100.0	 100.0	 100.0	 100.0	 100.0	 100.0

^aSearch nodes in satellite centers excluded.

Source: Questionnaire Survey, 1972.

SECTOR ANGLES of SEARCH NODES by ORIGIN ZONES

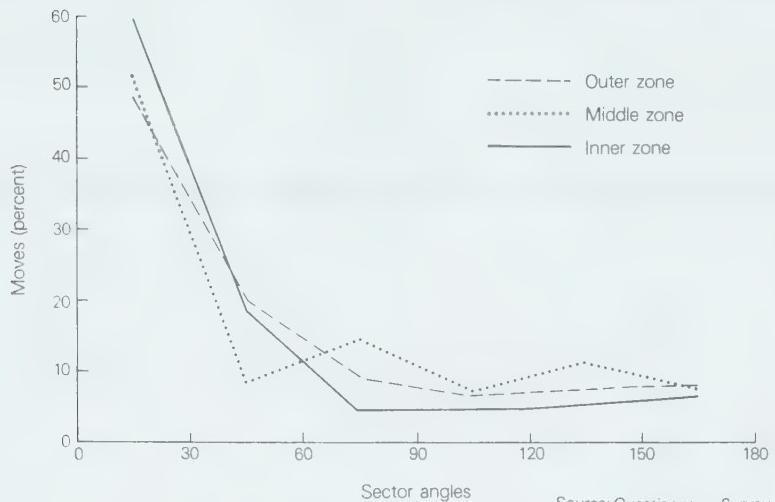


Figure 11.a

SECTOR ANGLES of SEARCH and RELOCATION NODES by ORIGIN ZONES

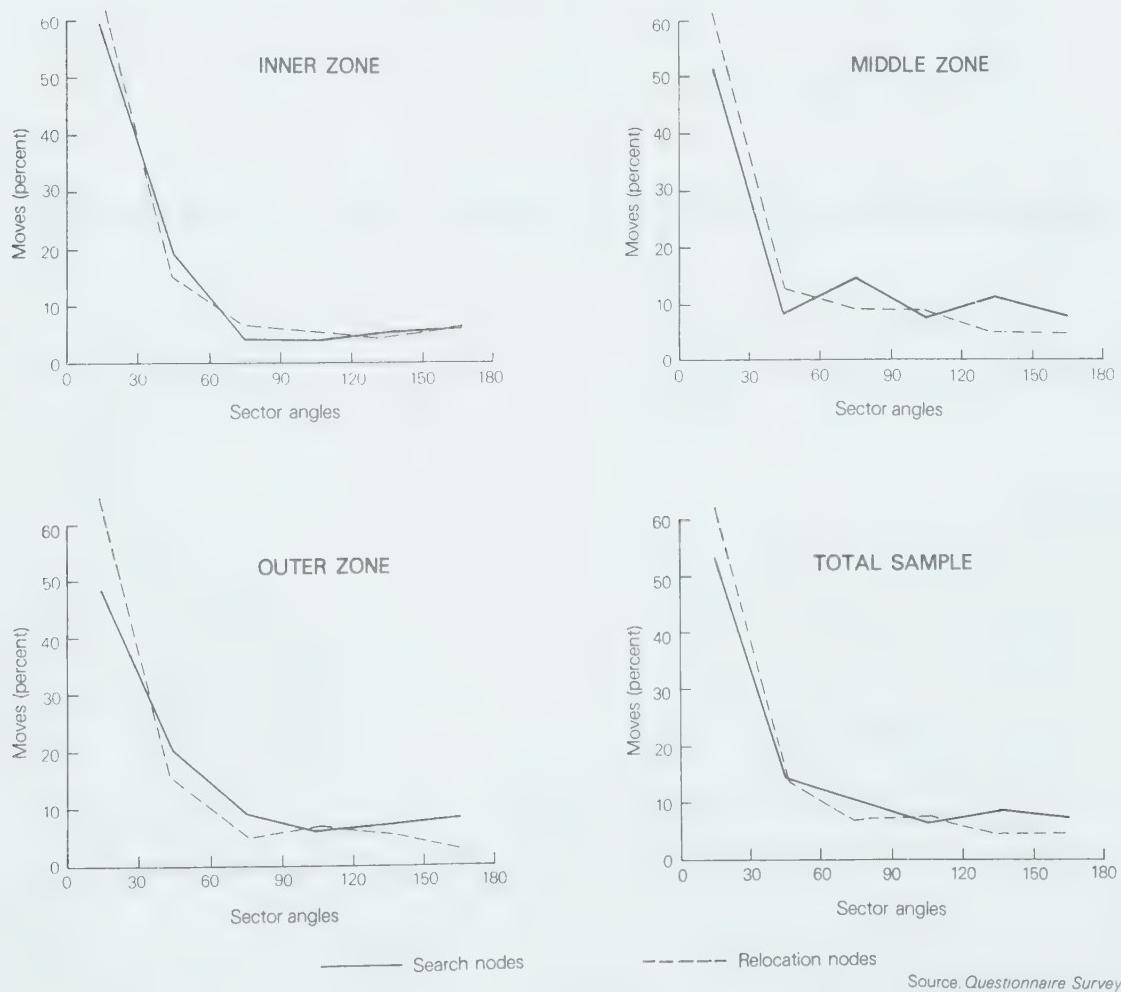


Figure 11.b

Source: Questionnaire Survey,
1972

SECTOR ANGLES of SEARCH NODES by DESTINATION TENURE

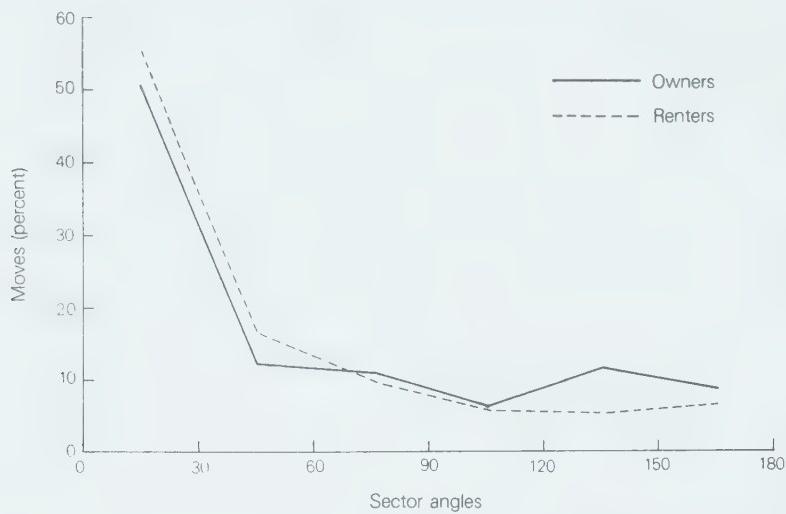


Figure 12.a

Source: Questionnaire Survey,
1972

SECTOR ANGLES of SEARCH and RELOCATION NODES by DESTINATION TENURE

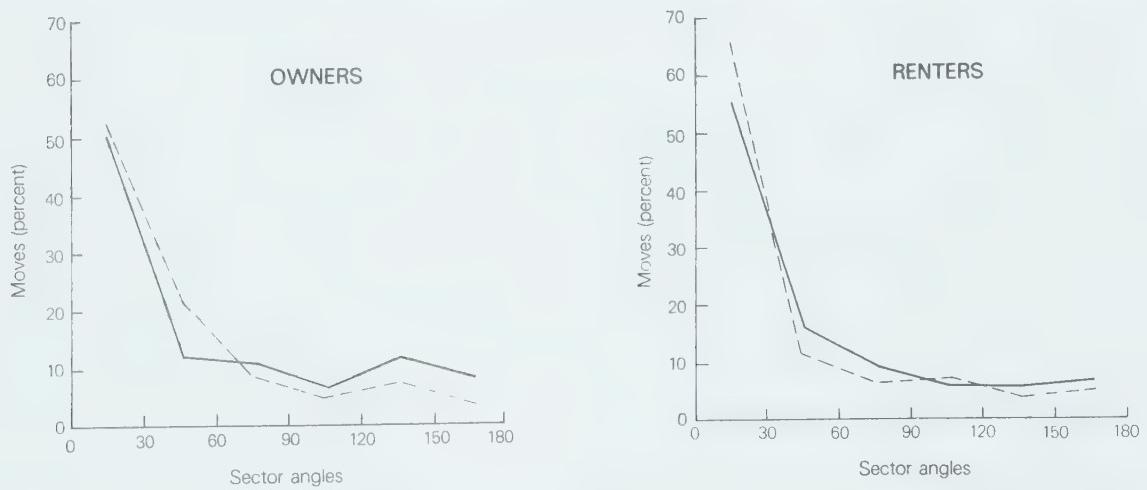


Figure 12.b

Source: Questionnaire Survey,
1972.

density surface of the outer suburbs, thereby forcing searching outer zone households to range relatively further afield. The preceding analysis of zonal search space distance biases lends support to this notion.

Destination Tenure. The data indicate that the search spaces of renter households are somewhat more sectorally biased than owner search networks (Table 31 and Figure 12a). To a large extent, this is a logical corollary of the tendency for the owner households to search at greater distances than their renter counterparts. It also likely reflects the greater degree of clustering of rental units within urban areas.

Search and Relocation Space Sectoral Biases: Comparisons. As was the case with the distance dimension, a comparison of the distributions of search node and relocation node sector angles revealed the latter to have the greatest degree of bias (Figure 11b). Extending the comparison with the distance factor, it is likely that the differential bias reflects both a desire to remain within the same sector and yet a willingness to at least look beyond the home sector if necessary. Faced with a choice between two or more otherwise equal alternatives, though, one of which is located in the home sector, it would seem reasonable to expect most households to opt for the dwelling in their present sector.

This appears to be particularly so as regards outer origin zone households. It has been noted above that the search spaces of these households show the lowest measure of sectoral bias, but when it actually comes to choosing a new dwelling, these households stand

as the most sectorally inclined (Figure 11b). A similar tendency characterizes renter households (Figure 12b). Owners, on the other hand, appear to be relatively more open-minded about relocating outside their origin sector, suggesting their appreciation of the greater difficulties involved in satisfying their aspiration sets.

Directional Bias of Search Spaces

Not unexpectedly, the net orientation of the complete set of search nodes was discerned to be outwards. Slightly more than 60 per cent of all the inspected dwellings were further removed from the downtown center than were the searching households' origin residences, approximately one-third were closer to the C. B. D., while the remaining 5 per cent involved no change in position relative to the city center (Table 32). In line with the findings of Chapter III, Table 32 indicates that most search nodes involved little absolute change in the household's linear distance to the C. B. D. This, of course, reflects the marked distance bias of search activities. At the same time, it is also a measure of the fact that when they started searching, almost two-thirds of the surveyed households with definite locational preferences relative to the city center wished to find alternative accommodation at about the same distance as their origin dwelling.

Origin Zones. As could be expected, both inner and middle origin zone household search spaces showed distinct outward biases (Table 32). Also as anticipated, outer zone movers exhibited a net inwards orientation. However, this latter bias was considerably weaker than was expected, as almost half of the units inspected by

TABLE 32

DISTANCES OF SEARCH NODES FROM PEAK VALUE INTERSECTION
 RELATIVE TO ORIGIN NODE DISTANCES FROM PEAK VALUE
 INTERSECTION, BY ORIGIN ZONES AND DESTINATION TENURE^a
 (PERCENTAGE OF SEARCH NODES)

Distance (Miles)	Inner Zone N = 472	Middle Zone N = 795	Outer Zone N = 463	Owners N = 801	Renters N = 929	Totals N = 1,730
<i>Closer to P.V.I. than Origin Nodes</i>						
Less than 0.5	9.9	18.8	11.9	10.1	18.3	14.5
0.5 - 0.9	3.4	6.3	9.1	2.0	9.9	6.3
1.0 - 1.4	-	5.9	8.2	1.5	7.8	4.9
1.5 - 1.9	-	1.2	7.3	1.4	3.6	2.5
2.0 - 2.4	-	0.7	4.5	0.7	2.4	1.6
2.5 - 2.9	-	0.1	5.2	0.7	2.1	1.4
3.0 and over	-	-	5.0	-	2.5	1.3
<i>Further from P.V.I. than Origin Nodes</i>						
Less than 0.5	28.2	15.0	12.3	12.9	22.2	17.9
0.5 - 0.9	12.1	9.3	9.1	9.2	10.7	10.0
1.0 - 1.4	7.2	5.9	13.4	13.7	3.5	8.3
1.5 - 1.9	5.7	10.6	7.6	12.7	4.7	8.4
2.0 - 2.4	4.4	1.1	2.2	1.9	2.7	6.9
2.5 - 2.9	5.1	5.0	1.3	7.0	1.5	4.0
3.0 and over	15.3	5.3	-	12.7	1.3	6.6
Same Distance from P.V.I. as Origin Nodes	8.7	4.7	3.2	3.7	6.8	5.4
Totals	100.0	100.0	100.0	100.0	100.0	100.0

^aSearch nodes in satellite centers excluded.

Source: Questionnaire Survey, 1972.

outer zone households were further away from the P. V. I. than the households' origin dwellings.

Destination Tenure. Particularly striking differences were found to exist between renter and owner search networks (Table 32). Renters showed equal propensities to inspect dwellings closer to and further away from the city center. Owners, however, displayed a heavy outwards bias. These findings reflect the intra-urban distribution of tenure types (opportunities) in association with a general disinclination to move radically closer to the city center.

Search and Relocation Space Directional Biases: Comparisons. In the case of the distance and sectoral components of residential movement, it was found that actual relocations were more biased than the search spaces from which they were drawn. However, this relationship proved to be reversed in the case of the directional dimension.

A net outward orientation was still observed in the completed migrations, but it was considerably less than what might have been anticipated given the bias of the household search spaces. At the conclusion of their search activities, only 52.9 per cent of the households effected a move which placed them at a greater distance from the city center, whereas 62.1 per cent of the search nodes had been thus located. The major part of this difference was taken up by moves involving no change in distance to the C. B. D. Search nodes of this nature only tallied 5.4 per cent of all inspected dwellings, but when it finally came to relocating, 11.8 per cent of the households chose dwellings in this category. Meanwhile, a further 5 per cent of

the mover households moved no more than half a mile closer to or further away from the downtown center. These data thus further support the notion that comparatively few households wish to effect drastic changes in their positions in intra-urban space relative to the city core.

SUMMARY

The overall aim of this chapter has been to shed light on various aspects of household search spaces. The analyses presented cover three broad topics: (a) the general question of search and areal knowledge, (b) the formation of search spaces, and (c) the spatial biases of household search spaces.

With respect to the first topic, the widely accepted notion that search activity is completely confined within known areas was seriously challenged by the survey data. Thirty per cent of the surveyed households reported having looked at at least one dwelling in a previously unknown area; less than 10 per cent stated that lack of knowledge about some areas had put them off looking for dwellings in those areas, while almost 90 per cent of the sample indicated that lack of knowledge would not discourage them from looking in a particular area if they had seen a promising advertisement in the newspaper.

Classification of the sample into sub-groups revealed forced movers and owners to be most inclined towards searching in unknown areas. It was also expected that the propensity to search in unfamiliar areas would prove to be inversely related to length of residence in the city. However, the survey data indicated no

consistent relationship between these variables. Newspapers and walking and driving proved to be the most important information channels as regards leading households into unknown areas.

The examination of search space formation revealed that slightly more than two-thirds of the mover households consciously eliminated certain parts of the city from consideration before search actually began. As was expected, owners were most inclined to undertake this pre-search areal selectivity. For the sample as a whole, considerations of distance to workplace constituted the most commonly cited reason for eliminating areas. Not surprisingly, the strength of the journey to work factor varied according to chosen intra-urban location, being most pertinent to inner city dwellers and least so for satellite locators. Renters, as a group, also placed most significance on journey to work and general accessibility considerations, though this was to be expected given the relative clustering of renters in the inner zone. For owners, on the other hand, the physical quality of areas emerged as the leading eliminating criterion, followed closely by considerations involving the journey to work and costs.

The analyses of the spatial properties of household search spaces revealed the existence of distinct distance, sectoral, and directional biases. Comparison of household search and relocation spaces indicated that chosen locations were relatively more biased in terms of their distance and sectoral dimensions than the search networks from which they were drawn. However, in the case of the directional component, the reverse was found to be true.

Chapter IX

CONCLUSIONS

The preceding chapters have investigated selected aspects of the spatial patterning of intra-urban migration and the residential relocation decision-making process. This chapter attempts to place the study in a somewhat wider perspective. In particular, attention is paid to synthesizing what may appear to be a miscellany of findings and to drawing several implications for future research.

THE STUDY'S FINDINGS: A SYNTHESIS

The intention of this section is to bring together in a general statement the study's principal findings on the residential relocation process. In the introductory section of the dissertation, it was stated that, as a geographical investigation, the study was concerned with examining the spatial dimensions of residential mobility. Conceptually, it is possible to identify at least two levels of spatial perspective in migration studies.

Firstly, at a general level, migration by definition involves physical movement in geographic space. Thus, all migration studies, regardless of their individual emphases, are in this general sense 'spatial'. This is obviously particularly true of studies such as the present one, which explicitly seek to explain the decision-making sequences responsible for these movements. Secondly, and in a more specific sense, migration studies can adopt a spatial perspective in terms of the variables identified and employed to explain migration behavior.

However, this latter perspective gives rise to the fundamental question of - "What is a spatial factor?" A typical dictionary definition of 'spatial' is "pertaining to, involving, or having the nature of space,"¹ But a multitude of factors can pertain to space, in one way or another, and in varying degrees of meaningfulness. For example, distance, location (site and situation), size, and shape are what might be called primary spatial factors; primary in the sense that they are first and foremost concepts of physical space. On the other hand, there are what can be viewed as secondary spatial factors: that is, factors which exhibit meaningful variations in geographic space, but which, in the first instance, are of some other nature (e.g., physical, social, economic, psychological) and should be interpreted accordingly. In terms of the present study, such factors as the social and physical character of neighbourhoods, dwelling type, and tenure status fall within this category. Finally, there are those factors which are essentially aspatial. These factors may vary in space, but any such variations are relatively insignificant. For example, factors such as 'financial considerations', 'poor management', and 'ownership aspirations' can be considered to be of this type.

The basic reason for making this distinction of factor types lies in the fact that the empirical analyses of the relocation process have ranged across a wide variety of individual factors and the reader may have found it rather difficult to place an overall perspective on the various findings. Consequently, this section provides a

¹ Funk and Wagnalls, Standard College Dictionary, New York, Funk and Wagnalls, 1968, p. 1286.

general overview of how and when the three sets of factors and, in particular, the purely spatial factors are important in the relocation decision.

Factors Associated with the Decision to Move

The conclusion to be drawn from the Edmonton data is that the decision to move is most frequently precipitated by primary spatial factors. As will be remembered from the empirical analyses, the motivating factor of greatest single significance was inadequate dwelling space. Although this particular condition frequently carries various socio-psychological correlates, in essence it can be regarded as a (micro) spatial factor. The contention that primary spatial factors are dominant at the outset of the relocation process also derives support from the fact that one-sixth of the interviewed households moved because their previous residences had placed them too far from their workplaces. Furthermore, several of the reasons offered for moving varied significantly in terms of the households' origin locations within the city. For example, inner city dwellers, reflecting the generally smaller size of dwelling units in that part of the city, gave greatest significance to space inadequacies as a motivating factor. Meanwhile, households originating in the middle and outer suburbs voiced excessive distance from work as an important causal factor.

Most movement decisions not brought about by primary spatial factors were generally prompted by aspatial factors, in particular by ownership aspirations and excessive dwelling costs. The corollary of the above findings is that secondary spatial factors such

as neighbourhood physical and social character are relatively insignificant in actually inducing households to move.

Household Aspirations

In large measure, the pattern outlined for migration motivations also obtained for household aspiration sets. That is, taken as a whole, primary spatial factors were of greatest proportionate importance. The largest single share of aspirations related to site and dwelling features, and within this general category, space specifications were predominant. Second most frequently cited as aspirations were journey to work considerations. In addition, several households were concerned for general accessibility specifications of one type or another. Altogether, considerations regarding the space dimensions of sites and dwellings, the journey to work, and general accessibility accounted for 50.6 per cent of the first mentioned aspirations. Also, once again, residential location emerged as an important predictor of household aspirations. For example, in the case of inner city locators, journey to work specifications were primate, whereas outer city and satellite center locators heavily emphasized site and dwelling features and, in particular, space specific features.

Although purely spatial factors tended to dominate household aspiration sets, the empirical data suggest that various other factors are of quite considerable importance. Not unexpectedly, the most important of these is the financial factor. Cost considerations are of importance to a large proportion of mover households and are a useful indicant of search behavior, as most households which specify cost criteria as an initial aspiration also make their eventual

dwelling choice on the same basis.

Secondly, standing alongside the space criteria of site and dwelling aspirations, is a general concern for dwelling condition. While this factor is subordinate to space requirements as a first mentioned aspiration, half of the respondents nonetheless indicated that it was a very important criterion in their evaluation of vacancies and, thus, it must be considered to be a significant conditioner of search behavior.

Finally, owner tenure status also appears to have some value as an indicator of this aspect of search behavior, as the survey revealed purchaser households were especially keen to obtain site and dwelling specific features.

Information Seeking

The survey data suggest that residential information flows and utilization are generally better understood in terms of dwelling type and tenure status than primary spatial factors.

To briefly recap, the data indicated that information obtained from realtors, newspapers, and friends and relatives was biased towards houses, whereas walking and driving around the city tended to be more productive of apartment units. Meanwhile, the analyses of information source utilization and effectiveness indicated destination tenure status to be an important explanatory variable.

Some areal variations were observed but, in large measure, they derived more from the above factors than from the operation of pure spatial factors. Only with regards to information channel distance biases can the observed patterns be generally

considered to reflect the operation of primary spatial factors. In this respect, the empirical findings strongly accord with postulates on the distance-decay properties of household acquaintance fields.

The Choice of a Dwelling

Three dimensions of the final dwelling choice were chosen for study: the range of alternatives considered, the reasons for choosing the destination dwelling, and the attraction of the chosen residence relative to the other dwellings inspected. The general conclusion reached from the empirical analyses is that the relative importance of the various types of factors varies between the three dimensions of choice.

In the case of the range of alternatives considered, destination tenure status clearly showed itself to be an important indicator. Generally speaking, owners consider far more vacancies than renters before finally making a choice.

With regard to the specific reasons for the ultimate choice, all three types of factors, primary spatial, secondary spatial, and aspatial, play important roles although, of the three, primary spatial factors are proportionately most significant. Altogether, reasons relating to the space dimensions of the chosen unit, the journey to work, and general accessibility totalled 47.0 per cent of the first mentioned final choice criteria. Financial reasons were of next greatest importance, followed by non-spatial aspects of the site and dwelling.

Finally, in the case of the third topic investigated, the comparison of features of the chosen dwelling with rejected alternatives,

only the aspatial factor of costs consistently emerged with a 'better' rating.

Household Search Spaces

The propensity to search in previously unknown territory appears to be more a function of tenure status than any pure spatial factor. Households who bought their destination dwellings proved to be almost twice as likely as renters to venture into unfamiliar areas.

Owners were also more inclined to exclude known areas from consideration before they actually began searching. However, primary spatial factors, in the form of distance to work and general accessibility considerations, are highly important in terms of constituting criteria on which this pre-search exclusionary behavior is based.

With respect to the spatial dimensions of search spaces, destination tenure appears to be a particularly useful predictor. In brief, the survey data suggest that, compared with renters, owners tend to search further afield for new dwellings and show respectively less sectoral bias and more outward directional bias in their search patterns.

In concluding these comments on the relocation process, the point should perhaps be made that the findings of this study are, in an absolute sense, specific to the Edmonton urban area. At the same time, though, a conscious attempt has been made to avoid anchoring the study to urban features and conditions peculiar to Edmonton. Hopefully, therefore, future studies will reveal the findings to

have considerable generality.

IMPLICATIONS FOR FUTURE RESEARCH

The present study holds at least three broad implications for future research. These implications concern: (a) conceptual approaches to the study of intra-urban migration, (b) operational aspects of residential mobility studies, and (c) potential areas for research.

Conceptual Approaches

With respect to the first issue, it was noted in the introductory section of the study that geographic intra-urban migration research has followed two distinct lines - behavioral and non-behavioral. It was also noted that the behavioral tradition has, in turn, encompassed two types of studies: those examining the spatial biases of intra-urban flows, and those concentrating on aspects of the actual relocation decision-making process. The present study has, to a certain extent, touched upon each of these approaches and thus allows some comments on their respective utility as regards future research.

Of these approaches, the non-behavioral tradition is suggested as offering the fewest rewards for future research. It is almost certainly true to say that the major concern within this tradition has been the study of mobility rates and, although the present study indicated that that topic still holds some unresolved issues, taken as a whole it constitutes one of the better understood aspects of intra-urban migration. For instance, planners faced with the need to

predict mobility trends are equipped for this task with a generally consistent set of findings regarding the relationships between population turnover and various dimensions of urban residential structure.

The study of migration spatial biases within an overall behavioral context deserves further study. For example, this study has isolated an apparent sectoral bias consistent with a wedge-shaped mental image of the city. If sectoral bias can be shown to be an inherent regularity of intra-urban migration behavior, important planning implications arise; in particular, if housing demand is largely sector specific, housing suppliers and planners should structure their operations accordingly. At the same time, surrounding the general question of sectoral bias is the problem of defining the most relevant mental sector for migrant households. Most studies to date have utilized the notion of mental images based on a residence-C. B. D. axis. However, for movers not employed in the C. B. D., a residence-workplace axis might be more meaningful and should be thoroughly investigated.

All the same, given the need for such research, there would seem to be a limit to the explanatory level studies of this nature can attain. For instance, in the case of sectoral bias and the concept of wedge-shaped images, empirical studies of the type suggested above can only infer the existence and operation of such images.

On the basis of this type of reasoning, it is suggested that the most fruitful avenue for future research lies within the decision-making tradition with which the present study has been largely concerned. To illustrate, with respect to the notion of mental images controlling residential movement, it will be most productive to

establish the spatial structure of household images and then empirically examine the relationship between images and search behavior.

This conclusion gives rise to the subject of the following section: namely, how can studies of the residential relocation decision be best undertaken.

Operational Aspects

Two points in particular arise from the present study. The first relates to the question of when to obtain information from mover households; the second involves the issue of research scale.

Regarding the first point, two alternatives are open to researchers: the retrospective approach whereby mover households are interviewed some time after their move, and the 'diary' approach whereby households intending to move are asked to keep day-by-day accounts of their search activities.

To date, the approach usually employed in migration decision-making studies has been that followed in the present study: namely, post-migration interviews of selected mover households. The principal advantages of this approach are that mover households can generally be traced fairly easily and, once located, can give an accounting of their move in a single interview. On the other hand, retrospective investigations suffer from problems of information recall. For example, as the present study shows, residential movements can be traced by a comparison of telephone directories, but reliance on indirect sources of this nature inevitably involves some degree of time lapse between the act of moving and the interview survey. At the outset of this study, it had been hoped to study the

temporal expansion of household search spaces, but many households, while able to remember the vacancies they had inspected, could not recall the exact order in which they had been inspected and, thus, this goal had to be abandoned. Similarly, it had been hoped to establish composite place utility indices for all dwellings inspected, but numerous respondents could not recall the detailed information needed for this purpose.

In view of these problems, it is suggested that researchers should seriously consider the 'diary' approach in future studies. Obviously a number of operational difficulties surround such an approach. Firstly, there is the problem of locating households who intend to move. Realtors could perhaps provide researchers with information on households currently looking for dwellings. However, in view of the findings of the present study, the households located in this manner would in no way be representative of the total mover population. Similarly, households advertising for dwellings in the local newspaper could be contacted, but once again there would be no certainty that such households were representative of all movers. Secondly, there is the difficulty of ensuring that the households, once located, conscientiously report their search behaviors. For many households, the process of searching for a new dwelling is rather stressful and, thus, they may not wish to be burdened with the upkeep of a diary.

Despite the likelihood of these problems, it seems to the author that the potential returns from the diary approach still more than offset the inherent difficulties involved. For example, such an approach would eliminate the problems met with in the present

study of tracing the sequential expansion of search spaces and calculating comparative place utility indices. Indeed, it would provide more dynamic insights into all aspects of the relocation process.

For example, it is likely that as search progresses, some households restructure their aspiration sets or adopt various new search strategies. The diary approach is more likely than the retrospective interview to discern these and similar such subtleties of search behavior.

The second operational issue raised is that of research scale. In the case of the present study, 342 lengthy interview schedules were completed. The data obtained in this manner were then used to examine various dimensions of the residential relocation decision.

As the reader will remember, the study's empirical analyses were largely presented in the form of cross-tabulations. However, a sample of this size poses quite finite limitations on the complexity of the cross-tabulations possible. For example, in the examination of the range of alternative dwellings considered, mover households were stratified according to their destination tenure status. Added insights would have been achieved if this dimension had, in turn, been cross-tabulated with origin tenure or previous residential experience in Edmonton. However, the sample size disallowed refinements of this type, thus giving rise to the question of whether studies of this nature would not be best handled by heavily funded, multi-disciplinary research groups. Further to this point, the study's diverse findings suggest that refined techniques of multivariate analysis should be employed to measure the exact explanatory level of the numerous variables relevant to the residential location decision-making process. Research groups of the type proposed would be well suited to undertake

such analyses. In turn, individual researchers might find it profitable to concentrate on more confined aspects of the topic, though this, of course, presupposes that research teams and sufficient funds will be available for broad studies of the residential relocation process.

Potential Research Areas

As is frequently the case with research in the social and behavioral sciences, this study, while providing insights on various issues, has at the same time raised numerous substantive questions for future studies. To the author's mind, two issues in particular need further geographical research.

Firstly, there is the general topic of household search spaces. As pointed out in the study, this is probably the most neglected facet of residential mobility. Within this overall topic, two specific aspects need attention. The first of these is the relationship of spatial search behavior to household awareness spaces. Aspects of this question were touched upon in the present study and yielded empirical results suggestive of behavior contrary to current popularly held postulates. The second aspect concerns the sequential development of spatial search: namely, how exactly do household search strategies and spaces develop over time?

The second issue requiring attention is the concept of place utility. It was noted in the Introduction that some attempts have been made to operationalize the concept, but to date no completely satisfactory measure has been derived. Furthermore, the attempts that have been made have utilized a really aggregated data. What is needed is a composite index of site and situational utilities applicable

to the individual household unit. The calculation of such an index for a mover household's origin and destination dwellings and the other vacancies it inspected would place the total relocation process in a more comparative perspective, providing useful insights on the 'rationality' of the achieved relocation.

Investigation of these and related issues will reward researchers with an increased understanding of intra-urban residential movement and, hopefully, provide urban planners and developers with a useful theoretical base upon which to project future development.

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APPENDICES

9a. DID YOU CONSIDER ANY OTHER COURSE OF ACTION BESESIDES MOVING?

1. Yes
2. No

(If "Yes") WHAT WAS IT? _____

WHY DID YOU NOT FOLLOW IT? _____

9b. DID YOU CONSIDER ANY OTHER COURSE BESESIDES THAT?

1. Yes
2. No

(If "Yes") WHAT WAS IT? _____

WHY DID YOU NOT FOLLOW IT? _____

10. ONCE YOU DECIDED TO SEEK A NEW DWELLING WHAT SPECIFIC RESIDENTIAL REQUIREMENTS DID YOU SET YOURSELF TO OBTAIN? (Please list in order of importance.)

Trade-offs

11. WHEN YOU WERE LOOKING FOR A NEW RESIDENCE HOW IMPORTANT WERE THE FOLLOWING FACTORS IN YOUR EVALUATION OF DWELLINGS? (Hand Card #2.)

FACTORS	N.I.	S.I.	V.I.*	Trade-offs
				Q.12

ACCESSIBILITY TO:

Downtown
Head's site of employment
Spouse's site of employment

Shopping

Schools

Church

Friends and relatives

Recreational areas

Public transportation

Major highways

Other (Specify)

PHYSICAL CHARACTERISTICS OF NEIGHBOURHOOD

Layout (e.g. streets)

Condition (e.g. streets, sidewalks)

Spaciousness

Aesthetic aspects

Quietness

Variety of housing styles

Other (Specify)

SERVICES AND FACILITIES OF NEIGHBOURHOOD

Public utility services

Police and fire

Schooling

Shopping

Other (Specify)

SOCIAL ENVIRONMENT OF NEIGHBOURHOOD

Neighbourhood reputation

Neighbours of similar socio-economic level

Neighbourhood friendliness

Other (Specify)

SITE AND DWELLING

"New" house

Large lot

Exterior design

Interior design

Number of rooms

Size of rooms

Garage

Basement

State of repair

Other (Specify)

FINANCIAL FACTORS

Upper price limit

Lower price limit

Resale potential

Other (Specify)

12. BY CHOOSING THIS PLACE DID YOU HAVE TO GIVE UP ANY IMPORTANT FACTORS WHICH YOU HAD HOPE TO OBTAIN? (I.e. in Questions 10 & 11)

Interviewer: Check off trade-offs in columns provided in Questions 10 & 11.

13. WHY DID YOU DECIDE TO FORGO THESE FACTORS?

14. WHAT WERE THE MOST IMPORTANT FACTORS IN YOUR CHOICE OF THIS DWELLING? (Please list in order of importance)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

15. WHEN YOU FIRST STARTED TO LOOK FOR ANOTHER PLACE TO LIVE:

(a) WERE YOU LOOKING FOR A PLACE TO RENT OR BUY?

1. Rent
2. Buy
3. No Preference
4. Don't Know

(b) WERE YOU LOOKING FOR A HOUSE OR AN APARTMENT?

1. House
2. Apartment
3. No Preference
4. Don't Know

16. WHEN YOUR HOUSEHOLD WAS LOOKING FOR A NEW PLACE TO LIVE WHO DID MOST OF THE LOOKING?

- Head of household and spouse
- Head of household
- Spouse
- Other (Specify) _____

17. AND WOULD YOU SAY MADE THE FINAL DECISION TO MOVE TO THIS PLACE?

1. Head of household and spouse
2. Head of household
3. Spouse
4. Other (Specify) _____

18. HOW LONG WAS IT FROM THE TIME YOU DECIDED TO SEEK A NEW RESIDENTIAL LOCATION UNTIL YOU FOUND THIS DWELLING?

Years _____ Months _____ Weeks _____ Days _____

19. OF THIS TIME HOW LONG WERE YOU LOOKING SERIOUSLY?

Years _____ Months _____ Weeks _____ Days _____

20. WHICH OF THE FOLLOWING SOURCES OF INFORMATION DID YOU UTILISE IN YOUR SEARCH FOR A NEW DWELLING?

Sources	Yes	No
1. Newspaper	_____	_____
2. Real Estate Agents	_____	_____
3. Walking/driving around	_____	_____
4. Friends/relatives	_____	_____
5. Other (Specify) _____	_____	_____

21. WHICH OF THESE SOURCES DID YOU FIND MOST HELPFUL?

22. (Ask if Mover did not use Realtor Services) WHY DID YOU NOT USE THE SERVICES OF A REAL ESTATE AGENT IN YOUR SEARCH FOR A NEW DWELLING?

23. (Ask if Mover used Realtor services) WERE YOU SATISFIED WITH THE SERVICES OFFERED TO YOU BY REALTORS?

1. Yes
2. No

(If "No") WHY NOT? _____

24. HOW MANY DWELLINGS DID YOU LOOK AT IN YOUR SEARCH?

* Degree of Importance: same as in Q.8

25. NOW I WANT TO ASK YOU A NUMBER OF QUESTIONS ABOUT THE PLACES YOU WENT AND LOOKED AT DURING YOUR SEARCH FOR A NEW DWELLING: THAT IS ONCE YOU HAD MADE THE DECISION TO SEEK A NEW RESIDENCE. Interviewer: code responses in table below.)

(a) What were the addresses/general locations of the dwellings you inspected? (Please list dwellings in order of inspection and also plot on Map #2)

questions for each dwelling inspected.

- (b) Was this dwelling a house or an apartment?
 - (c) From which of the information sources in Q.20 did you initially find out about this dwelling?
 - (d) The first time you visited this dwelling did you have any prior knowledge about the area in which it is located?
 - (e) (If "Yes") Was this knowledge personal or non-personal?
 - (f) How many times did you visit this dwelling?
 - (g) Did this dwelling fall within your range of acceptability?
 - (h) Why did you not choose this dwelling?

(f) Please rank these dwellings in the order in which you would have preferred them to be your home. (i.e. assuming you could have had any one of them.)

MAP #2

26. THE FOLLOWING SIX FACTORS SUMMARISE THE BASIC CHARACTERISTICS OF ANY DWELLING. (Hand Card #3)

- (a) Please rank the six factors according to the relative importance you assigned to them when you were looking for a new dwelling. (Scale: 1, Most Important; 6, Least Important)

(b) Please give each of these factors a percentage value in terms of the relative importance you assigned to them when you were looking for a new dwelling. (i.e. the six % values should add to 100%)

FACTORS	RANKING	% SCORE
1. Accessibility	_____	_____
2. Physical characteristics of neighbourhood	_____	_____
3. Services and facilities of neighbourhood	_____	_____
4. Social environment of neighbourhood	_____	_____
5. Site and dwelling	_____	_____
6. Financial factors	_____	_____

27. WHEN YOU WERE LOOKING FOR A NEW DWELLING DID THESE SIX FACTORS REMAIN OF RELATIVELY CONSTANT % IMPORTANCE OR DID THEIR % IMPORTANCE CHANGE CONSIDERABLY FROM DWELLING TO DWELLING?

1. Remained relatively constant
 2. Changed considerably

28. WITH REFERENCE TO THESE SIX FACTORS RANK, ON THE SCALE BELOW, YOUR PREVIOUS RESIDENCE AND ALL THE DWELLINGS YOU INSPECTED. (i.e. in order of inspection)

Scale: 1. Poor; 2. Fair; 3. Average; 4. Good; 5. Excellent.

29. FROM THE POINT OF VIEW OF YOUR HOUSEHOLD'S RESOURCES (E.G. FINANCIAL ETC.) AND REQUIREMENTS WHICH WERE THE FIRST, SECOND, THIRD AND FOURTH BEST DWELLINGS YOU INSPECTED?

1. _____ 3. _____
2. _____ 4. _____

30. COMPARED WITH THE OTHER DWELLINGS YOU LOOKED AT, WOULD YOU SAY THE PLACE YOU CHOSE WAS BETTER, THE SAME, OR WORSE WITH REGARD TO THE FOLLOWING FACTORS: (a) AT THE TIME YOU CHOSE IT? (b) NOW? (Hand Card #4)

FACTORS	WHEN CHOSEN			NOW		
	Better	Same	Worse	Better	Same	Worse
Costs	—	—	—	—	—	—
State of repair	—	—	—	—	—	—
Number of rooms	—	—	—	—	—	—
Size of rooms	—	—	—	—	—	—
Lot size	—	—	—	—	—	—
Kind of people in neighbourhood	—	—	—	—	—	—
Neighbourhood reputation	—	—	—	—	—	—
Neighbourhood layout	—	—	—	—	—	—
Neighbourhood condition	—	—	—	—	—	—
Shopping	—	—	—	—	—	—
Schools	—	—	—	—	—	—
Accessibility to work	—	—	—	—	—	—
Accessibility to downtown	—	—	—	—	—	—
Accessibility to friends/relatives	—	—	—	—	—	—
Recreational areas	—	—	—	—	—	—

31. DO YOU FEEL THAT IF YOU HAD CONTINUED LOOKING FOR A DWELLING YOU WOULD HAVE FOUND AN EVEN BETTER PLACE TO LIVE?

1. Yes
2. No

- Hydrogen

(it "yes") WHY DIDN'T YOU KEEP LOOKING

INTERVIEWER: If all answers to Q.25d are "yes" go to Question 32. If any answer to Q.25d is "No" go to Question 33.

32. YOU HAVE STATED THAT YOU HAD SOME PRIOR KNOWLEDGE OF ALL THE AREAS YOU LOOKED IN. DID THE FACT THAT YOU KNEW NOTHING ABOUT SOME AREAS PUT YOU OFF LOOKING FOR SUITABLE DWELLINGS IN THOSE AREAS?

1. Yes
2. No

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(If "Yes") Why

33. YOU HAVE STATED THAT YOU HAD NO PRIOR KNOWLEDGE ABOUT SOME OF THE AREAS YOU LOOKED IN. DID THE FACT THAT YOU KNEW NOTHING ABOUT SOME AREAS BEFORE YOU VISITED THEM POSE ANY TYPE OF PROBLEM TO YOU?

1. Yes
2. No

(If "Yes") HOW? _____

DID LACK OF PRIOR KNOWLEDGE PUT YOU OFF GOING AND LOOKING IN ANY AREA?

1. Yes
2. No

(If "Yes") COULD YOU EXPLAIN WHY YOU LOOKED IN SOME AREAS THAT YOU HAD NO KNOWLEDGE OF AND DIDN'T LOOK IN OTHER SUCH AREAS?

34. DID YOU HAVE ONE SPECIFIC NEIGHBOURHOOD IN MIND WHEN YOU BEGAN LOOKING FOR A NEW DWELLING?

1. Yes
2. No

(If "Yes") WHAT NEIGHBOURHOOD? _____

WHY THAT NEIGHBOURHOOD? _____

DID YOU SUCCEED IN MOVING TO THAT NEIGHBOURHOOD?

1. Yes
2. No

35. WHEN YOU BEGAN SEARCHING WERE THERE ANY PARTS OF EDMONTON ABOUT WHICH YOU HAD SOME KNOWLEDGE BUT IN WHICH YOU DECIDED NOT TO LOOK?

1. Yes
2. No

WHAT AREAS? _____

WHY DID YOU MAKE THIS DECISION? _____

36. (If answer to Q.35 is "Yes") DID YOU LATER CHANGE YOUR MIND AND SEARCH IN SOME OF THOSE AREAS?

1. Yes
2. No

(If "Yes") WHAT AREAS? _____

WHY DID YOU CHANGE YOUR MIND? _____

IS THIS DWELLING IN ONE OF THOSE AREAS?

1. Yes
2. No

37. WHEN YOU BEGAN SEARCHING DID YOU WANT TO LOCATE CLOSER TO THE CITY CENTER, FURTHER OUT FROM THE CENTER, OR AT ABOUT THE SAME DISTANCE?

1. Closer to city center
2. Further out
3. Same distance
4. No preference

AT WHAT ADDRESS WAS (a) THE HEAD OF THE HOUSEHOLD (b) SPOUSE
EM LOVED WHEN YOU MOVED?

Head _____ Spouse _____

40. IN YOUR SEARCH WAS IT VERY IMPORTANT, SOMEWHAT IMPORTANT, OR NOT IMPORTANT THAT YOU TRY TO LOCATE CLOSE TO THE HEAD'S WORKPLACE? SPC'S WORKPLACE?

Head of household's workplace

1. Very important
2. Somewhat important
3. Not important

Spouse's workplace

1. Very important
2. Somewhat important
3. Not important

41. DID YOU LOCATE YOU CLOSER, FURTHER AWAY OR AT ABOUT THE SAME DISTANCE FROM THE HEAD'S WORKPLACE? SPOUSE'S WORKPLACE?

Head of household's workplace

1. Closer to workplace
2. Further away
3. About same distance

Spouse's workplace

1. Closer to workplace
2. Further away
3. About same distance

42. DID KNOWLEDGE GAINED FROM PREVIOUS RESIDENTIAL SHIFTS WITHIN THE CITY HELP INFLUENCE YOUR CHOICE AS TO WHICH PARTS OF THE CITY TO SEARCH IN?

1. Yes
2. No

(If "Yes") HOW? _____

43. IF YOU WERE LOOKING FOR A RESIDENCE AND YOU SAW AN ADVERTISEMENT IN THE NEWSPAPER ABOUT A DWELLING WHICH APPEARED TO MEET YOUR RESIDENTIAL ASPIRATIONS WOULD YOU GO AND INSPECT THIS DWELLING?

- (a) If you had a favorable opinion of the area?

1. Yes
2. No

- (b) If you had an unfavorable opinion of the area?

1. Yes
2. No

- (c) If you had no knowledge and opinion about the area?

1. Yes
2. No

44. MAKE THE FOLLOWING ASSUMPTIONS ABOUT THE ACCOMPANYING MAP OF EDMONTON.

- (i) YOU LIVE IN ONE SECTOR AND HAVE DECIDED TO LOOK FOR ANOTHER PLACE TO LIVE.

(io) SUITABLE VACANCIES EXIST IN ALL SECTORS.

- (a) Would you look only in your present sector or in several sectors?

1. Present sector
2. Several sectors

- (b) Why? _____

- (c) Is there any sector(s) in which you would not look?

1. Yes
2. No

- (d) Which sectors? _____

- (e) Why not? _____

45. AS A RESULT OF MOVING IS A GREATER PROPORTION OF THE HOUSEHOLD'S INCOME NOW BEING SPENT ON ACCOMMODATION?

1. Yes
2. No

46. SINCE MOVING HERE HAVE YOU FOUND ANY UNEXPECTED ADVANTAGES AND/OR DISADVANTAGES OF LIVING IN THIS HOME AND NEIGHBOURHOOD?

Advantages	Disadvantages
1. Yes	1. Yes
2. No	2. No

(If "Yes") PLEASE SPECIFY

Advantages	Disadvantages
_____	_____
_____	_____

47. COMPARED WITH YOUR PREVIOUS RESIDENCE, WOULD YOU SAY THE PLACE YOU CHOSE WAS BETTER, THE SAME, OR WORSE WITH REGARD TO THE FOLLOWING FACTORS:

(a) AT THE TIME YOU CHOSE IT? (b) NOW? (Hand Card #5)

WHEN CHOSEN NOW

FACTORS	Better	Same	Worse	Better	Same	Worse
Costs	—	—	—	—	—	—
State of repair	—	—	—	—	—	—
Number of rooms	—	—	—	—	—	—
Size of rooms	—	—	—	—	—	—
Lot size	—	—	—	—	—	—
Kind of people in neighbourhood	—	—	—	—	—	—
Neighbourhood reputation	—	—	—	—	—	—
Neighbourhood layout	—	—	—	—	—	—
Neighbourhood condition	—	—	—	—	—	—
Shopping	—	—	—	—	—	—
Schools	—	—	—	—	—	—
Accessibility to work	—	—	—	—	—	—
Accessibility to downtown	—	—	—	—	—	—
Accessibility to friends/relatives	—	—	—	—	—	—
Recreational areas	—	—	—	—	—	—

48. TAKING ALL THINGS INTO CONSIDERATION ARE YOU MORE OR LESS SATISFIED WITH YOUR PRESENT HOME AND NEIGHBOURHOOD THAN YOU WERE WITH YOUR PREVIOUS LOCATION?

1. More satisfied
2. Less satisfied
3. No real difference

49. DO YOU PLAN TO MOVE WITHIN EDMONTON DURING THE NEXT YEAR? THE NEXT FIVE YEARS?

Next Year	Next Five Years
1. Yes	1. Yes
2. No	2. No

(If "Yes") Why? _____

50. (If answer to Q.49 is "Yes") I WOULD LIKE YOU TO TELL ME SOME OF THE THINGS YOU WILL BE TRYING TO OBTAIN IN YOUR NEXT MOVE.

(a) Do you plan to buy or rent?

1. Buy 3. No Preference
2. Rent 4. Don't Know

(b) Do you plan to move into a house or an apartment?

1. House 3. No Preference
2. Apartment 4. Don't Know

(c) If a house what type?

1. Single detached 4. Other (Specify)
2. Duplex 3. No Preference
3. Row 6. Don't Know

(d) If an apartment what type?

1. Walkup 3. No Preference
2. Midrise 4. Don't Know

(e) Do you plan to move:

1. closer to downtown 4. No Preference
2. Further away 5. Don't Know
+ about the same distance

(f) Will you seriously consider moving to a dormitory satellite?
(e.g. Sherwood Park, Spruce Grove, St. Albert etc.)

1. Yes

2. No

Why? _____

(g) Will you try to stay in this neighbourhood?

1. Yes

2. No

Why? _____

51. IF TWO DWELLINGS WERE EQUAL IN PRICE WHICH WOULD YOU CHOOSE IN EACH OF THE FOLLOWING PAIRS? (Hand Card #6)

(a) A very good place in a less desirable neighbourhood, OR A very good neighbourhood but a less desirable place,

1. _____ 2. _____

(b) A very good neighbourhood but located so that it would be difficult for you to travel to other parts of town, OR less desirable local neighbourhood,

1. _____ 2. _____

(c) A very nice outside appearance but a less desirable inside appearance, OR A very nice appearance inside but a less desirable outside appearance,

1. _____ 2. _____

Finally I would like to ask you a number of questions about your household. This information is required for statistical purposes and like the rest of the questionnaire the information given will be kept strictly confidential.

HOW OLD WAS THE HEAD OF THE HOUSEHOLD AT THE TIME OF MOVING?

1. 0 - 24 4. 45 - 54
2. 25 - 34 5. 55 - 64
3. 35 - 44 6. 65 plus

HOW MANY PEOPLE WERE THERE IN THE HOUSEHOLD WHEN YOU MOVED?
(Please specify the numbers)

Head _____ Spouse _____ Children _____ Others (Specify) _____

52. HOW OLD WERE THE CHILDREN WHEN YOU MOVED?



53. WHAT WAS THE HIGHEST LEVEL OF EDUCATION COMPLETED BY THE HOUSEHOLD HEAD AT THE TIME OF MOVING?

1. Grade 8 or less 4. Some University
2. Grade 9 - 12 5. Bachelor's degree
3. Technical training 6. Graduate degree

56. TO WHAT ETHNIC OR CULTURAL GROUP DID YOU OR YOUR ANCESTOR (ON THE MALE SIDE) BELONG TO ON COMING TO THIS CONTINENT?

- | | |
|--------------|--------------------------|
| 1. English | 9. Jewish |
| 2. French | 6. Netherlands |
| 3. German | 7. Native Indian |
| 4. Ukrainian | 8. Other (Specify) _____ |

57. DO YOU CONSIDER YOURSELF TO BE (ENGLISH, FRENCH, ETC.)? _____

1. Yes
2. No

58. WHAT WAS THE OCCUPATION OF THE HOUSEHOLD HEAD AT THE TIME OF MOVING? (please describe) _____

- | | |
|---|-------------------------------|
| 1. Managerial | 2. Professional and Technical |
| 3. Transport and Communication | 4. Clerical |
| 5. Sales | 6. Service and Recreation |
| 7. Craftsmen, production, process and related workers | 8. Laborer |
| 9. Other | |

59. IN WHICH OF THE FOLLOWING CATEGORIES WAS YOUR HOUSEHOLD'S TOTAL INCOME BEFORE TAX AT THE TIME YOU MOVED?

1. Under \$4000
2. \$4000 - \$9999
3. \$10000 - \$19999
4. \$15000 plus

THAT IS THE END OF THE INTERVIEW. THANK YOU FOR YOUR COOPERATION.

Kevin McCracken
Department of Geography
University of Alberta

APPENDIX B

SELECTED SAMPLE CHARACTERISTICS

This appendix outlines selected characteristics of the households interviewed in the questionnaire survey. These data are intended to serve as background information for the analyses in Chapters IV-VIII and, consequently, are limited to the principal household characteristics referred to in those chapters. The text briefly describes the principal characteristics of the respondents. Complete statistical breakdowns of the sample characteristics are given in the accompanying tables. The zonal origins and destinations of the households are also presented.

Tenure Status

The vast majority of the households had rented their previous dwelling (89.2 per cent). Almost all of the migrants originating in the inner city had been renters (96.3 per cent), whereas one in five of the outer city movers had owned their origin dwelling.

As a result of moving, the proportion of owners in the sample rose to approximately one-third (32.2 per cent). Owners outnumbered renters in the case of movers to the outer suburbs (57.1 per cent) and satellite centers (88.2 per cent).

The overall tenure pattern was as follows: 8.2 per cent of the movers retained owner status, 2.6 per cent changed from owners to renters, 65.2 per cent remained renters, and 24.0 per cent changed from renters to owners.

Dwelling Types

The majority of the sampled households had moved from apartments (61.7 per cent). The proportion of households originating in apartments was highest in the inner zone (89.7 per cent) and lowest in the outer suburbs (33.3 per cent).

As a result of moving, 56.4 per cent of the households were living in houses. In line with the intra-urban distribution of dwelling types, the proportion of households living in houses was highest in the outer suburbs (80.4 per cent) and satellite centers (94.1 per cent) and lowest in the inner city (6.6 per cent).

Of the total sample, 28.9 per cent moved from one house to another house, 9.4 per cent moved from a house to an apartment, 34.5 per cent moved between apartments, and 27.2 per cent moved from an apartment to a house.

Family Status

Most households sampled in the survey consisted of families (81.3 per cent). Considered in terms of origin location, the proportion of the households sampled consisting of families was largest in the outer zone (96.7 per cent) and lowest in the central city (71.0 per cent).

Household Size

The modal household size was two persons. Households originating in the inner and middle sections of the city mirrored this statistic, whereas the modal size of outer origin zone households was four persons.

APPENDIX B

TABLE 1

SELECTED SAMPLE CHARACTERISTICS, BY ORIGIN ZONES
(PERCENTAGE OF HOUSEHOLDS)

Characteristics	Inner N = 107	Middle N = 145	Outer N = 90	Totals N = 342
Origin Tenure				
Owners	3.7	9.0	22.2	10.8
Renters	96.3	91.0	77.8	89.2
Destination Tenure				
Owners	25.2	31.7	41.1	32.2
Renters	74.8	68.3	58.9	67.8
Origin Dwelling				
Houses	10.3	41.4	66.7	38.3
Apartments	89.7	58.6	33.3	61.7
Destination Dwelling				
Houses	35.5	63.4	70.0	56.4
Apartments	64.5	36.6	30.0	43.6
Families as a Percentage of Households	71.0	79.3	96.7	81.3
Number of Persons in Household				
1	24.3	12.4	3.3	13.7
2	44.9	37.9	20.0	35.4
3	19.6	26.2	18.9	22.2
4	10.3	13.2	27.8	16.1
5	0.9	4.1	17.8	6.7
6	-	4.1	8.9	4.1
7	-	2.1	-	0.9
8	-	-	3.3	0.9

Source: Questionnaire Survey, 1972.

APPENDIX B

TABLE 2

SELECTED SAMPLE CHARACTERISTICS, BY DESTINATION ZONES
(PERCENTAGE OF HOUSEHOLDS)

Characteristics	Inner N = 91	Middle N = 122	Outer N = 112	Satellite N = 17	Totals N = 342
Origin Tenure					
Owners	6.6	9.0	16.1	11.8	10.8
Renters	93.4	91.0	83.9	88.2	89.2
Destination Tenure					
Owners	2.2	23.8	57.1	88.2	32.2
Renters	97.8	76.2	42.9	11.8	67.8
Origin Dwelling					
House	23.1	36.1	53.6	35.3	38.3
Apartment	76.9	63.9	46.4	64.7	61.7
Destination Dwelling					
House	6.6	66.4	80.4	94.1	56.4
Apartment	93.4	33.6	19.6	5.9	43.6
Families as a Percent- age of Households					
	62.6	77.9	97.3	100.0	81.3
Number of Persons in Household					
1	35.1	9.8	2.7	-	13.7
2	37.4	43.4	21.4	58.8	35.4
3	18.7	23.0	25.0	17.6	22.2
4	8.8	13.9	25.0	11.8	16.1
5	-	4.9	13.4	11.8	6.7
6	-	4.1	8.0	-	4.1
7	-	0.8	1.8	-	0.9
8	-	-	2.7	-	0.9

Source: Questionnaire Survey, 1972.

APPENDIX B

TABLE 3

ORIGINS AND DESTINATIONS OF INTERVIEWED HOUSEHOLDS

Origin Zones	Destination Zones				Totals
	Inner	Middle	Outer	Satellites	
Inner	61	23	19	4	107
Middle	18	82	36	9	145
Outer	12	16	58	4	90
Totals	91	121	113	17	342

Source: Questionnaire Survey, 1972.

APPENDIX C

TABLE 1

TEN PERCENT MIGRATION SAMPLE: ORIGINS AND DESTINATIONS OF CONFIRMED MOVES^a

Origin Zones	Destination Zones				Totals
	Inner	Middle	Outer	Satellites	
Inner	235	111	61	15	422
Middle	86	263	144	28	521
Outer	40	86	208	34	368
Satellites	1	5	2	13	21
Totals	362	465	415	90	1,332

^aSee p. 27 for a description of the procedures followed to confirm moves.

Source: Edmonton Telephone Directories 1970, 1971.

APPENDIX D
REALTOR QUESTIONNAIRE SCHEDULE

DEPARTMENT OF GEOGRAPHY
TELEPHONE (403) 432-3274



THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA T6G 2H4

Dear Sir,

At present the Department of Geography is undertaking a study of residential mobility in Edmonton. For purposes of background information we wish to obtain some data on various aspects of realtor operations in the residential real estate market. Consequently, we would appreciate if you would complete the following questions, adding any other comments which you feel would be of importance, and return the questionnaire in the self-addressed, stamped envelope.

- Q.1. What percentage of the dwelling units handled by your firm are:
 Apartments? ____%; Houses (for sale)? ____%; Houses (for rent)? ____%.
 Comments: _____
- Q.2. What percentage of the dwelling units handled by your firm are located within: one mile of your office? ____%; two miles? ____%; three miles? ____%; over three miles? ____%.
 Comments: _____
- Q.3. What percentage of your clientele come from within: one mile of your Office? ____%; two miles? ____%; three miles? ____%; over three miles? ____%.
 Comments: _____
- Q.4. What percentage of your clientele approach your office:
 (a) after seeing a newspaper advertisement? ____%.
 (b) after seeing an on-site "for sale/for rent" sign? ____%.
 (c) without having seen or heard any particular advertisement? (i.e. just come in to see what units you've got at that time) ____%.
 Comments: _____
- Q.5. Please describe any residential real estate specializations which you consider your firm has developed - i.e. in terms of:
 (a) Types of units: (e.g. apartments, townhouses etc.) _____
 (b) Locations of units: (e.g. inner city, west end etc.) _____
 (c) Clientele: (e.g. high/medium/low income etc.) _____
 (d) Any other specialties: _____

Your information will of course be kept strictly confidential and at no point in the study will the name of your firm or any other company appear. If you wish you may confirm the validity of the study at the above address, or by contacting the Real Estate Research Committee, Department of Extension, University of Alberta.

Thanking you for your cooperation.

Yours sincerely,

Kevin McCracken

University of Alberta Library



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